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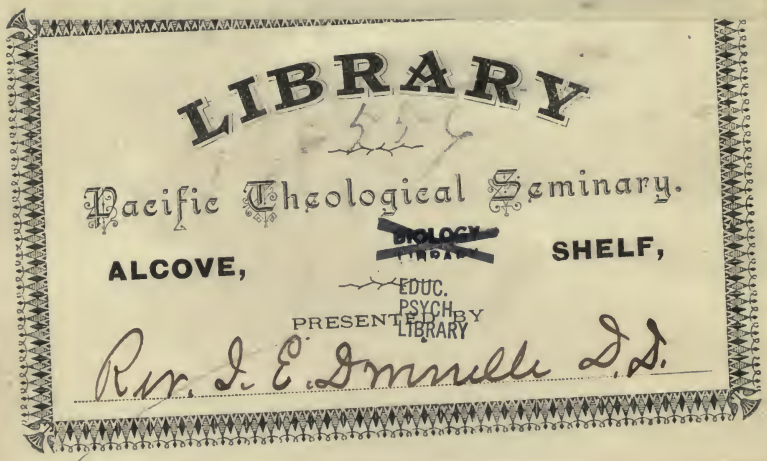

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EDUCATION

ON

PHYSIOGNOMICAL PRINCIPLES;

OR

HOW TO DEVELOP THE MIND AND BODY OF YOUTH IN ACCORDANCE WITH VARIOUS TYPES OF ORGANISATION.

A LECTURE,

BY

J. SIMMS, M.D., OF NEW YORK.

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EDUCATION

ON SCIENTIFIC PRINCIPLES;

OR,

IN ACCORDANCE WITH THE VARIOUS TYPES OF HUMAN ORGANISATION.

A LECTURE,

By J. SIMMS, M.D., of New-York.

Most of us, by a slight effort of memory, can recall to mind instances of fond parents, with hearts brimful of solicitude for their offspring, and of yearning anticipations for their future welfare, striving with every fibre on the stretch to endow them with educational advantages for the future battle of life, far in excess, perhaps, of the moderate allowance which formerly fell to their own share. We have known them in their tender earnestness pinching themselves at home, and denying themselves almost the necessaries of life, to the end that their moderate income might be adequate to the furtherance of the cherished dreams of their lives. How melancholy it is to think that much of this wistful expenditure of energy is worse than wasted and thrown away, by reason of the anomalies which, for hundreds of years, fostered by traditional inertia, have clustered about and choked the whole subject of the education of the young. Parental pinching and striving, no doubt, occasionally results in brilliant success; but this is no more the result of logical sequence, or an adaptation of the means to the end, than is the drawing of a prize in the lottery the well-reasoned consequence of the original trifling investment. The whole system of education is so essentially a groping in the dark, that for one lucky hit there are a thousand misses—nay, worse than misses, for, according to the prevailing educational system, it is hardly possible *simply to fail* in producing good results; and the failure is too often accompanied by deterioration, physical and mental, to an extent which it is really harrowing to contemplate. In the great majority of cases the superhuman exertions made by loving parents have the effect only of turning out upon the world decrepid, deformed, one-sided, and twisted bodies, encasing minds which may be described almost in the same words. The hard-

earned savings of the parents have been worse—far worse—than thrown away. They have been expended unwittingly, unknowingly, and with totally different intentions, it is true, to the undoing of the loved ones whom it was their dearest wish to shield and cherish. Such parents as we have spoken of, however, are conscientiously guided by the lights which they have received; and far be it from us to seek to attach blame to them for the disastrous results which follow their well-meant exertions. No! At the door of the rottenness of the present fashionable system of education must the blame be laid. At the door of the indiscriminate stuffing, and cramming, and parrot repetition, and such like abominations handed down to us, encrusted with the hallowed dust of time, must be laid the incalculable mischief which has been and is now perpetrated. We do not for a moment claim to have been the first to point out the crying evils which surround the popular and time-honoured system of the education of the young; but we do contend that no adequate or even approximate solution of the difficulty has yet been offered, although many efforts in this direction have been made from time to time. Under the above heading we would humbly, and with a full sense of the gravity of the subject, offer some suggestions from a scientific point of view regarding a system of education which would be in harmony with nature herself, and with the natural form which she has given as a birthright to the child.

In the first place, we shall endeavour to show that, according to the prevalent method of going to work, children are sent far too early in life to the cramped confinement of a school-room, where the initial processes of dwarfing the body and mind are inaugurated in constrained and unnatural positions, before the structure of the child is solidified to a sufficient extent to enable it, on its release from school, to throw off completely the influence which use and wont invariably seeks to perpetuate. Children at the tender years of four and five are not unfrequently remorselessly condemned to the restraint of the class-room. Now, we mean to say that this is a practice barbarous in the extreme, and born of the most lamentable ignorance. At so early an age the child does not possess anything that can be called bone in the strict sense of the word. That part of the body which is afterwards destined to become bone is now only soft gristle, tender and susceptible of the slightest impressions, which, as a natural consequence, it has a tendency to retain. It is, therefore, not difficult to understand how the germs of deformity may be engendered by constraint of position in a school-room; and if it be remembered that deformity of body is very rarely unaccompanied with deformity of mind, especially when such abnormal conditions have been superinduced at an early age,

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it will be seen how grave is the responsibility which rests upon parents in deciding upon the time at which their child shall be deprived for the best part of the day of the pure air of heaven and wanton freedom of limb. Anatomical researches have demonstrated that complete ossification of the bones—that is to say, a permanent hardening of the substance which originally was only the soft gristle referred to—does not take place until the child is nine years of age. At these early years the muscles, too, are only in a transition state, and being susceptible to pressure or any sustained force, the greatest care is necessary in avoiding conditions which may impede their full development, or even bring their growth to a standstill altogether; and here again is another weighty argument against imprisoning children of tender years in school-rooms or elsewhere where the most perfect freedom of action within certain limits is denied them. But the most condemnatory argument is found in the condition of the heart and lungs. These portions of the budding frame-work, the most delicate and most easily injured of the whole, are expanding and growing, and an adequate quantity of fresh air and exercise is absolutely indispensable to their healthy development. The tendency to engender the seeds of disease in these organs is peculiarly active in children of an early age, and anything that tends to impede the development of their healthy action ought to be shunned as the breath of the pestilence. No condition can possibly be more fatal to this development than the crowded school-room with its vitiated atmosphere, laden with particles of dust, and destitute of all the properties which we have just pointed out as essential for the well-being of the child. The position of the body, too, is quite antagonistic to the healthful action of the heart and lungs. These require the body to move about for their due expansion. This school-room life does produce the effect, however, of expanding and developing one part of the youthful system, while it is depressing and crushing the life out of all the others; but, alas! this unequal development is only another element of ultimate physical and mental ruin. The sensations of the poor child are the only portion of the organisation which here receive any impetus in the shape of exercise. They are, in fact, appealed to in an inordinate degree, and in the inverse ratio in which the other faculties are snubbed and depressed; and what is the consequence? The brain and nerves of sensation are developed to a painful degree. They become most acutely sensitive, and the poor child becomes ultimately a large-headed, nervous, conceited morbidity—miserable himself, and with all the requisites duly prepared for inflicting the most excruciating misery upon all those who are unfortunate enough to be much in contact with him.

Having thus demonstrated clearly, we hope, the woful results arising from a too early consignment to the close and heated atmosphere of the ordinary school-room, we shall now offer our suggestions regarding the treatment of young children up to nine years of age, as a remedy, or rather a substitute, for the time-honoured abuses which we have endeavoured to expose. Up to the ninth year, we are of opinion—an opinion which we would find it difficult to express too strongly—the education of the child should be carried on at home—in the house or during his walks—at his sports, or during the short intervals of quiet in which even children sometimes indulge. The gentle expansion of the budding intellect, and the healthful development—equal development—of all the physical functions of the body should be superintended by the mother, by the father, or by a tutor,—but best by far of all, by the mother, if she is a woman of good common sense and of fair education. This education—in the earlier stages at all events—should be confined to the conversational method, and ought to be carried on by the party in charge during the child's walks abroad, its sports, and short intervals of quietude at home, these intervals not being enforced for longer periods than ten minutes at a time of consecutive sitting. As we have already hinted, the mother, if possessed of the requisite qualities, is the very best tutor for the child, and thrice fortunate is that child who is so blessed with such a mother. Her tender solicitude and yearning love teach her instinctively how to draw out the affections and stimulate the intellect of her darling child so that both may act harmoniously and in unison. There is nothing on earth to match the tact and discrimination of a mother of this description in her dealings with her child. The male sex are left immeasurably behind in the race of love, and it is for this reason that we prefer above all for a child's tutor its own affectionate and judicious mother. We have watched many a man possessed of a cool and great intellect whose affections did not act in harmony with his intellect, and whose efforts were in consequence denuded of one-half their value to the world. There was no geniality or sportive and attractive plums thrown out during the steady flow of his essays or speeches; no warm and generous impulses sprung unbidden to add a lustre to the massiveness of his intellect; no reserve force of kindly humour to relieve the monotony of talent, like fresh, light-hearted troops joining the grave and battered veterans in battle and victory. The bright example of rectitude and worth which the child sees in such a mother, and the moral lessons which she instils into his mind in her own loving way, will prove in the end the surest safeguard and shield against those snares and temptations to which he must, in the

ordinary course of life, sooner or later be exposed; and lessons acquired in this way have not the evanescent character which school precepts too often possess. It would be difficult to find a man of forty years of age whose retrospects will not assure him, beyond a doubt, of the deterring effects from vice and sin which the lessons and warnings of a fond mother have exerted over his intercourse with the bustling and self-seeking world. We cannot lay too much stress on this conviction of ours, that, if possible, the loving and judicious mother should have the superintendence of the development of the dawning intellect of her child up to nine or ten years of age. On a sober and dispassionate consideration of this proposition we think few will gainsay the result at which we have arrived. By a training of this kind the child will be in the very best position for receiving a healthful and vigorous physical development, while his moral character will have conferred on it a stamina which will enable him successfully and easily to withstand the temptations which cannot fail to be presented before him when he afterwards takes his place in the ranks of a public school. We cannot reiterate too forcibly the paramount importance to the child, physically and mentally, of the tutorship of his maternal parent. The benefits accruing from the teacher to the taught it would be extremely difficult to over-estimate, and we would only repeat that the child can never have, as the world can never produce, a safer and more effective teacher than its own dear mother. Such a mother as we have been endeavouring to shadow forth will be able to dispense entirely with any approach to corporeal punishment. Her judgment will teach her how to appeal effectually to the spirit of her child, and thereby enable her to avoid the necessity of inflicting an appeal through the flesh, a method which carries with it the most baneful effects. In the subjoined cut we see such an one placidly and

Moral and Intellectual Suasion.

with kindly love imparting lessons of untold value to her child, and building up within him the faculty of self-government, without which no one is able successfully to encounter the higher trials and temptations of life. The magnetism of the mother, being of that quiet and self-governing character, exerts a soothing and reciprocating influence upon her boy; and even the very cat at her foot is evidently feeling the effects of the tranquil halo which she sheds around her.

"Look upon this picture and on that."

Behold the infuriated and ignorant mother blindly sowing the seeds of vice and malignity in the bosom of her son. Why? her style of correction has long since called forth in him the ugly temper and sullen ruffianism which instigated the very deed for which he is now being punished. Her aura, or magnetism, extends its baneful influence even to the cats, and sets them tearing each other to pieces for very sympathy. It is a matter for the most legitimate congratulation that this abomination of a bygone age—this old-fashioned mode of hate-raising and vice-forcing through bodily chastisement inflicted on the child is rapidly becoming disused, and we trust the time is not far distant when it will be known and spoken of only as a thing of the past.

Physical Suasion—Going to the *bottom* of the Matter.

We have now arrived at that epoch in the existence of the child when the mother's sole guardianship may be substituted for the curriculum of the public school, and our business has henceforth to do with the system of study which ought to be prosecuted there. At the age of nine or ten years the bones of the child have become solidified, and his whole organism has been fostered and matured by the judicious home-training which we have endeavoured to trace out. His moral character, too, has received the stamp of his mother's pure and cultivated mind, and her loving heart has girt him around physically and men-

tally with armour calculated to withstand the assaults to which he will too surely be subjected.

The uniform and indiscriminate mode of treatment which has been the rule in our common schools has been the curse of the educational system, which we trust will soon be replaced by another more in accordance with the principles of common sense, not to talk of science at all. Each child ought to be made to receive the instruction which it is wanted to convey through the avenue of his best developed faculties. Appealed to in this way, the pupil will respond cheerfully, and with ease to himself and pleasure to his teacher. If you wished to bring some influence to bear upon the executive of a self-governed people and desired any measure of success in the attempt, you would certainly try to bring your influence to bear through the channel of the dominant party in the country; and so it is also, or ought to be, with the teacher in swaying the child in the direction he wishes him to progress. He must be appealed to through his strongest faculties. Where the abdominal form is in the ascendant, the child can be largely influenced through that channel. In the case of a young child under nine years of age, his government can be adjusted to a nicety if due attention is paid to his proclivities in the matter of food. When he has committed a fault, let the punishment be a withdrawal of the kinds of food which he more particularly affects, and a substitution of that which he detests. When his conduct has been particularly meritorious, let him be regaled with some delicacy for which he cherishes an especial fondness. It is also well established that those of the abdominal form can receive and assimilate ideas best when the stomach is full. David Hume, the celebrated historian and philosophical writer, who was largely developed in the abdominal form, could eat a hearty meal and apply himself immediately thereafter to severe mental exertions without the slightest inconvenience. Many of his finest ideas were conceived and produced while he was partaking of food; and, in fact, the abdominal form being his strongest point, he was most speculative and clear-headed when this department was actively at work.

The pupil in whom the thoracic form is the dominant faculty will most readily receive instruction while snuffing the free air of heaven. Climbing hills or mountains, or in default of exercise on so large a scale, running up and down stairs with a tutor or parent, are occupations congenial to his particular organisation, and therefore occupations during the exercise of which the young mind can be best influenced and stored with ideas. Those of the thoracic form—that is to say, children with large noses, open nostrils, wide cheek bones, and good thoracic development generally—should be encouraged in debate, as they are well cir-

cumstanced for receiving instruction when they find themselves opposed. To confine such boys too closely to the benches of the class-room, is tantamount to closing the avenues of instruction. Their bodily conformation renders it physically impossible for them to learn much, or anything, in a position which is utterly antagonistic and unnatural to their ever-active forms. They attain the reputation of dunces; and yet how often do we find the dunces of the school, when finally released from the thraldom and bondage of the class-room, shooting out into shrewd and successful members of the community. In every case, whatever is most natural is easiest to perform, and whatever is most unnatural is most laborious. The thoracic form is one of continuous and unremitting action, and, allowed free scope, the pupil will learn well and quickly; while long continued imprisonment in a school-room is tantamount to martyrdom and intellectual death. Such children should receive their mental pabulum on the hill sides and in the open air, in the way that the far-seeing Agassiz often teaches young children on the slopes of Cambridge, or Harvard College, near Boston. We have a notable specimen of thoracic predominance in the great Napoleon. This wonderful genius delighted and revelled in the free air of heaven, and his most brilliant conceptions were evolved during his out-of-door excursions. The thoracic form is closely dependant upon the principle of air and exercise, and in the education of children in whom this form predominates, this principle should never be lost sight of, as it is a powerful lever in the hands of the tutor or teacher, for bringing the requisite influence to bear upon the pupil. The latter will be stimulated to fresh exertions to please his governors, by an extra allowance of out-door sport: while, on the other hand, the punishment of restraint and temporary debarment from his cherished play, will effectually deter him from readily repeating any delinquency which may have drawn upon him the displeasure of his teachers. As we have said before, to children of large thoracic development, restraint is the severest punishment that can be inflicted on them; while freedom is their highest gratification, and, to old and young, the nurse of their highest thoughts, and noblest aspirations. Those subjects, in which the muscular form is largely developed, will best receive congenial instruction at first, if allowed the free exercise of gymnastics, and of muscular exertion generally, whether in doors or out of doors. Children of this conformation are well circumstanced for storing ideas and amassing knowledge, when their muscles have something upon which to exert their superabundant strength; and this is the case even although the exertion is of such a nature as to preclude much stirring of the entire body, or any extra play of the lungs. The secret springs of their life

and thought force are to be found in the muscles; and, accordingly, when the latter are allowed the freest scope, conceptions and ideas well up freely and spontaneously. The education of such children, to be in strict accordance with Nature's high behests, ought to be conducted with a watchful eye, directed on muscular action. The muscular is at the root of all their motives of action, and, being the strongest element in their conformation, it sways the balance of strength in their organisation. To such, the gymnasium is a heaven of bliss; while enforced inaction of muscles is the severest punishment that can possibly be inflicted on them. As an instance of muscular notabilia, we may cite the case of Nicholas Klumber, a German, who flourished early in the sixteenth century. This fine example of the muscular and fibrous form is related to have been able to lift, unaided, a pipe of wine in the cellar, to carry it up into the street, and deposit it on the cart, as gently as if it had not been a twentieth part of the weight. This remarkable man was continually gathering knowledge while exerting his immense strength; and most of his finest ideas first vibrated along the fibres of his frame, while he was working and labouring. The intrinsic tendency of bones being to inertia or a disinclination to shift position, those children in whom the long form predominates—that is to say, those who are tall, and present a gaunt and lean appearance—can best be taught when they are allowed to remain in a state of inaction, such as lying or reposing on a couch. It would be in the highest degree absurd, and unreasonable, to require such subjects to jump and move about, and at the same time expect them to prove apt and promising scholars. As well might you expect ducks to alight on tree tops, or turkeys to take kindly to water. In the celebrated and deeply regretted Abraham Lincoln, we have an extraordinary specimen of the predominance of the bony form. He was eminently predisposed to bodily inertia; and it was while in retirement and bodily repose, that his active mind planned and elaborated the great emancipation proclamation.

Children with a predominance of the brain form—that is to say, those possessing heads of a size in excess of the other portions of their structure, can best receive instruction when the teacher can manage to bring into play their faculties of sight, hearing, smell, taste, and touch. It would be in a high degree beneficial for such subjects to have placed before them anything to attract these senses—such as highly coloured maps, to fascinate the eye, and pave the way for Geography, which might at the same time be imparted by means of *viva voce* explanations. Another highly favourable means of imparting knowledge—although one not quite so easily come at as the last—would be by

travelling through beautiful scenery, and the grand sublimity of Nature, by means of railroads, coaches, steamboats, &c., in the guardianship of a tutor who would, as time and opportunity offered, instil into the minds of his pupils, appropriate lessons in Geology, Geography, History, Botany, Zoology, Ornithology, &c., &c. Being the seat of the centres of sensation, whence messages with the rapidity of thought, are continually being forwarded and received to and from all parts of the corporeal republic, the brain, when in a condition of extra development, indicates that ideas can most readily be received and digested when the immediate surroundings of the individual are such as to call up emotions of pleasure and delight. Sweetly smelling flowers, and delightful aromas, appeal powerfully to the sense of smell in the large framed individual; and, when a child of this conformation is brought within the influence of such enchantments, his natural abilities are charmed and stimulated, and he can be more readily and easily governed, because of the stimulus he is receiving to mental thought and action. You would not expect to render a horse more tractable, or look for a returning neigh of pleasure and gratitude, if you were to present to him a nice warm mash of gravel stones as a treat, in lieu of the customary feed of oats? No; and you would ultimately discover it to be to your profit to stick to the oats: for, however admirable gravel stones may be in their way, there can be little doubt that horses, as a rule, are not partial to them. If then, we govern the horse by his likes and dislikes, how much more must the higher organisation of children be amenable to the same rule; and by displaying before the large-brained child, such things as, through one or all of his senses, he delights in, we are bringing so many aids to his education—so many stimulants in his onward progress to excellence. Joseph Justus Scaliger, the eminent and distinguished French scholar, was remarkable in his youth for an excessive predominance of the brain and nerve form. He is said to have been so acute of vision, that he could distinguish objects with comparative ease in the dark, immediately after waking from sleep, and this wonderful power he retained until he reached his twenty-third year. In his youth, his teachers found that he could readily be taught by deftly appealing to his peculiarities of sensation; and yet, singular to say, Scaliger, in his matured manhood, was chiefly noted for his petulance and illiberality.

The foregoing hints on the great avenues or forms, by which to awaken in the hearts of young people, a love of knowledge, must not be taken as a complete compendium of instructions on the subject. In fact, an uncompromising continuance in the formulæ which we have laid down, could result only in disaster, and probably in intellectual ruin, to the children operated upon.

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They are intended, therefore, only as the initial process, by which the virgin soil is opened; and when this is accomplished, and the educational seed fairly set a springing, other departments of husbandry of a totally different character must then be assiduously cultivated. When once, by acting on his predominant characteristics, the thirst for knowledge has been fully awakened in the boy, then it is time to desist from appealing to that portion of his organisation which is in the ascendant; for, as exercise begets growth, a continuance of such a course would amount simply to stimulating the development of that element which is already too strong; the entire structure would deviate further and further from the healthy balance which it is essentially desirable to maintain, and the whole object of an elaborate system of education would be defeated.

When, therefore, the young pupil is seen to be fairly started on the educational track, and fully interested in the work in which he is daily engaged, the duty of the teacher requires that he should carefully begin to stimulate gently the weaker faculties of his pupil, so as ultimately to make as near an approach as possible to a healthy balance of structural development. The following rules for the attainment of this most desirable object, are submitted. They do not pretend to be very particular or full; and much would naturally be left to the discretion and good judgment of the teacher:—

1st.—If the abdomen is weak, and relatively small, his eating and sleeping faculties should be stimulated; his studies should be curtailed and judiciously carried on, and all exercises approaching a violent character should be carefully avoided. An observance of these rules for a sufficient length of time, will certainly result in equalisation of faculties, and the whilom abdomenless subject may even become ventricose and fat.

2nd.—If the thorax, or upper chest, be poorly developed, and the action of the lungs and heart languid and weak, he must be encouraged under proper surveillance to scamper up and down hill, and to inhale bounteous draughts of the mountain air. For such a subject, it would be of the very greatest advantage were he permitted, during the period of his cure at all events, to reside in some mountainous tract of country.

3rd.—When the muscular development of the child is stunted and imperfect, he must be carefully taught to exercise the muscles frequently and well. It is an unfailing dictum of Nature, that, whatever is exercised grows, and this applies alike to the physical and the mental part of man. Each and every of the different forms are capable of growth and cultivation, and the degree is regulated by the amount of exercise which is accorded.

4th.—The small boned child can have this defect ameliorated by being made to take much horse-back exercise in the sunlight. Arduous bodily exertion or labour, too, if entered into in the open air, and carried on without haste or excitement, has a strong tendency to superinduce the desired attenuation of form, and the wished-for growth of bones.

5th.—In the case of small brained children, whose actions and sensations are sluggish and languid, we would prescribe a shifting panorama of beautiful scenic effects of various kinds. Let them see beautiful and varied sights, and take them where they can listen to enchanting music, smell the sweetest flowers, and taste the comfits and dishes which most commend themselves to their feeble palates. For them, a healthful and beneficial existence would be a constant round of visits to theatres, shows, and fairs; and, in fact, it would conduce very much to the strengthening of their weak points, were they to live very much in the busy and exciting scenes of some lively and pleasure-loving city.

The preceding five directional rules—given under the numbers, 1st, 2nd, 3rd, 4th, and 5th, respectively—we venture to hope, will be sufficient to enable the teacher or tutor to form a data, on which to conduct the cultivation and amendment of the entire physical and mental structural conformation of his pupils with safety, and with a prospective shielding of the body and mind against disease and death. This second stage of our system of scientific education, may be entered upon when the pupil has attained his tenth year; but the rule cannot be laid down in an arbitrary manner, as particular cases will often demand an earlier or later commencement, as the case may be, and in this connection, we see that much must necessarily be confided to the sagacity and common sense of the teacher or governor in charge. The same trust must also be reposed in him in reference to the *duration* of this second stage of the curriculum. Some elastic subjects will speedily take on the benefits of the system, to an extent beyond which it is evident it will be impossible to go; and, in other cases, the treatment may be beneficially continued up to the 20th year, or perhaps even longer. The teacher should first make the discovery as to the particular branch, or branches, for which, by nature, his new pupil is best suited; and, having satisfied himself on this point, a commencement should be made on the particular study which is most affected. Afterwards, when the pupil's experience of the school becomes slightly matured, his favourite study may gradually be merged into, and become amalgamated with those other branches of education, which it is desirable he should master, but for which he has hitherto displayed less aptitude or relish. The importance of

attention to this initial procedure is obvious enough. To start a child on the uncongenial sea of Grammar, when Grammar is his abhorrence, instead of entering him with mathematics, for which he has evinced a passionate fondness, is what, under the present system, is done every day; but the procedure is mischievous in the extreme, and commonly ends in engendering in the mind of the tortured pupil a life-long prejudice against books or culture of every kind. By all means, let such a child have his darling mathematics first, and you will soon find it comparatively easy to lead him gradually to partake of a little diluted Grammar, and ultimately induce him to assimulate as much of it as will be of essential use to him in after life. Each child should, at the commencement, be put into the hands of a competent Physiognomist, who would pronounce upon the relative development of the faculties, and point out the most fitting initial study, as well as where, in the bodily conformation, stimulus would be required, and where repression. For children, it would be well that this physiognomical examination should be repeated every five years —an arrangement which would act as a regulator of studies and of physical treatment. We may hint also in passing, our conviction that such examinations would be found eminently profitable for all classes, and all ages, as a guide to their rule of conduct; but of this we may treat more fully in another lecture.

The grand secret of success in the education of children, lies in early awakening in them a keen personal interest in the studies and occupations which are placed before them. This, we have already shown, may, with certainty, be accomplished by a judicious appeal, in the first instance, to their predominant faculties. The next most important point is the equalising and moulding of the faculties, so as to produce that beautiful harmony of action which is the "*summum bonum*" of physical perfection. To a shrewd and judicious teacher, the simultaneous prosecution of these two departments will not present any insurmountable difficulties. When the pupil is fairly started in the way in which we have pointed out, he should be gradually drawn to that particular study which is destined to be his "*pièce de resistance,*" in after years, and the sooner he is induced to regard it kindly, the better. If the pupil is destined to become a teacher of Greek, by all means use sufficient diligence to have the study of Greek entered upon; but do not think of doing so to the exclusion of English, which, so to speak, is the language the pupil is to live in, whatever he may ultimately teach. Unless looking forward to it as a means of livelihood, or future usefulness, the acquirement of Greek and Latin at school is simply a waste of time, and a witless disburse of money. In such cases, it is very rarely prosecuted to any degree of proficiency, and the little that

has been caught up is in after life soon dropped by the way, and entirely forgotten. On the other hand, time and money expended on living subjects of interest, such as authentic Geography, Physiognomy, Physiology, Geology, Zoology, and other branches which are perpetually cropping up, is time and money put out at interest, and secured by a bond and mortgage on society itself.

When those practical branches are mastered—those branches which are to enable the pupil to hold his own, and live in this pushing and jostling world—then it will be quite time enough to think of cultivating the ornamental departments, or accomplishments, as they are called. The ordinary run of accomplishments are rarely sufficiently valuable to enable its possessor, if need be, to procure a penny loaf to stay the cravings of hunger, and therefore we are inclined by all means to give them in matters of education, a secondary and inferior place. We have no ill-will to them; but we desire them to be kept in their proper sphere.

No study should be persisted in to the detriment of the health of the student. This is a maxim which we cannot inculcate too strongly. When sickness and disease usurp the domain of health and vigour, the richest stores of knowledge will not buy back the regretted days of joyous health. It should be the never ceasing and watchful care of the teacher to prevent any pupil from over-taxing his mind while undergoing the educational curriculum. Cases are not unfrequent of the willing horse working himself to death; and some children glue themselves to their studies with so much avidity that restraint cannot be withheld without risking the health. Aristotle justly wrote, "That nothing can be more reprehensible than to exact too much from children at any age: for great fatigue of body must injure the mind, and too great exertions of the mind are prejudicial to the body."

In conclusion, we would observe: The first element in the education of the child, should be that which will best fit him for taking his place worthily in the ranks of society; and those faculties should be aroused and quickened, which will enable him justly and mercifully to conduct himself when brought into contact with our common humanity. The second consideration should embrace an intellectual course of discipline; while the third and last aim should be directed to the consolidation of pure principles of morality, and the inculcation of those superior virtues which are the crown of all great minds. This precious seed can be best sown by the child's mother; and when the harvest is reaped, there will doubtless be found a sacred regard for truth—an inviolable respect for the rights and property of others, which is the foundation of the structure of civilised society—affection and esteem for relations immediately connected by ties

of blood (Dr. Johnson once remarked that relations were ready-made friends), feelings of genuine patriotism, and last, but not least, an abiding conviction of the existence of God, and of the impossibility of the wonderful plan of Nature, in all its beauty, having been created without a Creator.

A lady in Glasgow complained to us bitterly of having to pay taxes for the compulsory attendance of children at school. "Madam," we said, "Educate the children of Glasgow, and stifle the ruffianism which renders your property and person unsafe. You will reduce police taxation, and, in the long run, you will find it better, pleasanter, and *cheaper*, to pay for the schooling of the youngsters, than for their imprisonment and punishment."

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THE

SECRETS OF SUCCESS IN LIFE.

A LECTURE,

By J. SIMMS, M.D., of New-York.

The desire of material wealth is sufficiently laudable, and an honest strife in this direction has a tendency to bring into action the manliest parts of human nature. But it should be borne in mind that higher prizes than even worldly wealth are to be found in the lottery of life. The inestimable privilege of being able, in the quiet of declining years, to look back upon a life untarnished by meanness, deceit, or dishonourable dealing; and, above all, the inward approval of a conscience void of self-accusation, are rewards of far higher value than those which accrue from material wealth. The intrinsic worth of the former is not their only recommendation; for a faithful allegiance to the path of honour rarely fails to draw into its train a fair share of the good things of this life. The pathway of youth is beset with numerous snares; and it is desirable to place here and there beacon-lights of guidance for the inexperienced travellers about to commence their perilous journey. The advancing army of youth requires pioneers to remove obstacles, and point out hidden dangers and probable ambuscades. The first maxim which should be earnestly inculcated upon youth is—

Be Honest and Truthful in Dealing with Others and with Yourselves. Society is so saturated with hypocrisy and deceit that we are constantly hearing blatant falsehoods perpetrated, or witnessing unblushing lies enacted, while no little acuteness is required to escape being cheated and swindled. Libraries are inundated with fiction, while truth is huddled into corners or thrust ignominiously into the streets. The world is crowded with Gnathos displaying counterfeit badges of honesty; and were Diogenes to revisit the earth with his lantern, he would speedily return whence he had come, more sick at heart than ever. We sometimes fancy we can discern the dawn of virtue on the social, trading, and political horizons of the world; but the fond delusion vanishes, and, as of old, knavery and deceit remain staring from the faces of mankind. When I was

delivering a course of lectures in Boston, U.S., one of the audience presented the photograph of a man for my inspection. "A born thief," I pronounced; "when he has the chance that man will always steal." I afterwards found he was in jail, where he had often been before, and always for theft. To a physiognomist the human face is a book; and to be credited with honesty it is absolutely necessary to have the thing itself. It is to be deplored that there are so many who make mere pretensions to honesty and virtue; but to the credit of human nature be it said, there are high-souled people who would be reduced to beggary, and forfeit life itself, rather than stoop to dishonesty or meanness. M. Portius Cato, the famous Roman statesman, was remarkable in his administration of justice for the unbending steadfastness with which he pursued the path of duty. When his fair fame was aspersed, he chose his bitterest enemy, Tiberius Sempronius Gracchus, to sit in judgment upon him; and his magnanimity had its reward, when, for very shame's sake, he was declared innocent of the foul charges which aimed at his destruction. Grecian history affords a fine instance of moral worth in Aristides. Julius Drusus offered a large sum of money to any one who would contrive to make every room in his house so transparent that his actions would be patent to all the world. Such men must have been burning and shining lights amidst the general darkness, however; for we find that Asclepidorus could discover in Syria only three men of unblemished honour and truth. These were—Domninus the philosopher, Ilapius of Antioch, and Mares of Laodicea. Among those brilliant names of more modern times, whose fame will grow brighter with the lapse of time, we may cite Thomas Merks, Bishop of Carlisle, whose allegiance to truth cost him his life; Tyndal, John Knox, Lafayette, Washington, Jefferson, Wellington, Jackson, and Lincoln. Nothing will more rapidly loosen a man's hold upon prosperity than such behaviour on his part as leads to his being accounted unreliable in his dealings. Let, therefore, the foundation of your life-structure be a fearless love of truth, honesty, and justice, with an implacable hatred of deceit, chicanery, and meanness.

How to Select a Vocation. If you would avoid the risk of inaugurating your business career by an irreparable blunder, seek the counsel of a professional physiognomist. He alone, with absolute scientific accuracy, can indicate the particular walk in which you can be certain of the greatest amount of success and prosperity. The structure of your frame is probably made up of inequalities in point of development; and a profession should be chosen in which the strongest points of your mental and bodily organisation would be most brought into play. All men have some of their faculties but feebly devel-

oped; and the fatal mistake is often fallen into of adopting a profession demanding great exertion from those very parts which are deficient in strength. The deplorable consequences are, failures in business, and often shattered constitutions and premature graves.

Be Industrious ever. Industry will do much to supply the place of the great talent which perhaps you do not possess. The most abjectly miserable are those who are doomed to wilful or enforced inactivity. Idleness is a canker worm, eating and gnawing its way into the vitals; and, if not expelled, it will shatter to atoms the most dearly cherished dreams of your existence. Galen has said that idleness is "*maximum animi nocumentum.*" The body that is luxuriously fed and kept in idleness is but a forcing house of disease. The lounging dog becomes mangy; and undoubtedly man deteriorates in obedience to the same physical laws. To the Sybarites it was torture to look upon any exhibition of industry, and they even banished from their dominions all artificers who could not carry on their callings under cover and without noise. Probably the most inveterate votary of idleness of whom we have any authentic record was Romanus, the grandson of Romanus Laucapenus. He could hardly be prevailed upon to allow himself to be dressed in the morning; and he endured tortures during the day lest he should not be suffered to sleep in his clothes at night, and thereby avoid the distasteful exercise of getting himself undressed. He passed his waking time in swinish pleasures, which could be indulged in consistently with his predelictions for sloth. Another notable specimen of this besotted class was Altadas, or, as Julian called him, the African Sethos, eleventh king of the Assyrians. This individual voted business foolishness, and abandoned himself to sloth and the society of courtezans. We have every reason to congratulate ourselves on the vast improvement that has taken place in regal and imperial morality in more modern times. Alfred the Great, Charlemagne, and Peter the Great, were not precisely saints in every respect; but, as active and industrious workers, they were immeasurably elevated above those besotted magnates of ancient times. King William of Prussia, also, is an instance in our own day of the better developed aptitude for work which prevails amongst crowned heads. Industry is the only safeguard against poverty and vice. It endows men with usefulness and prosperity, while to women it is a crown of happiness and virtue. Do not fancy you can succeed in any worthy enterprise without the most untiring industry; and remember that the more the time of vigorous exertion is extended, and the more the hours of idleness are curtailed, the nearer is the desired consummation. The broad gulf between industry and sloth is the chasm which separates the banker from the beggar—genial prosperity from unmitigated wretchedness and ruin.

How best to Utilise your Spare Hours. There is no infatuation so perilous as that of a young man habitually, on being released from his work, betaking himself to the public house—there to lounge away, worse than unprofitably, the time which has been allotted to him for rest and improvement. The unfortunate youth who acquires habits of this kind has need to wrench the hankering from his bosom without delay, for that way leads to destruction. Procure and read such books as "Ledyard's Travels in Africa," "Humboldt's Cosmos," "Lyell's Geology," Owen's works on Zoology; the works of Herbert Spencer, Ruskin, Stuart Mill, and other standard writers. Time devoted to the reading of books of this class is an investment at compound interest, secured by a bond and mortgage on the soul of the investor.

Let the Company you Keep be Good. It is an old proverb, and a true one—"Like draws to like." Ducks congregate and sport in the water together, and crows lift their unmusical voices in concert. Take heed, therefore, of the companionship you seek to cultivate; for to an absolute certainty, whether innocent or guilty, the quality of your companions will rule the opinion which is formed of you by the world. Police officers are well aware of the tendency of like drawing to like; and a favourite mode of finding a criminal is by discovering the kind of retreat he is likely to seek. Man gradually acquires much of the characteristics of the associations, be they good or bad, with which he is brought immediately in contact. It is especially incumbent on young men who may change the sphere of their labours to act with caution in forming new companionships. A false step may prove fatal to the growth of the good seed which has taken root; and it is better to wait patiently until time and experience have lent their aids for a decision.

Take Counsel with Men whose Success in Life indicates the Worth of their Characters. It is reasonable to conclude that the man who has travelled over a road rendered dangerous in the extreme by pitfalls, broken bridges, treacherous fords, and still more treacherous robbers, and has reached his journey's end with unbroken bones and in good health and spirits, is well qualified to give advice to any subsequent traveller about to traverse the same perilous country. Just in the same proportion is the man qualified to give advice who has so far accomplished the most perilous part of the journey of life, and who now rests from his fatigues in the secure region which his tact and sagacity have enabled him to reach. He can tell his youthful brother how he evaded that pitfall which seemed yawning to receive him; and he can relate by what stratagems he foiled the intentions of a band of robbers that plotted his capture and destruction. It was the rule of the sagacious Stephen Girard to counsel only with

those who had succeeded in life. The traveller who has reached his journey's end, with broken limbs and empty purse, can give a dolorous account of how all this came about; but such information is worse than useless, as it only unhinges the courage which is so necessary for a successful prosecution of the journey. By all means, then, seek advice from the successful man. Some failures are attributable to rashness, and others to want of judgment; while the largest class have their origin in the overweening pride which scorns to ask advice where intelligence and experience are available. When you have fortified yourself with the counsel of men of large experience who have succeeded in business, summon all the prudence at your command to avoid the rocks on which so many goodly barques are lost before they are well out of the harbour. If you make a false step, recover yourself with all the speed you can, and proceed with increased vigilance and caution. Be modestly firm in your intercourse with the world; and remember that true modesty is a crown to its possessor. Lord Kames said of modesty—"It is the truest glass in the world to dress by, the choicest director of our discourses, and a sure guide in all our actions." There is no surer way of winning the esteem of your seniors than by preserving a modest yet firm deportment. A modest bearing argues the absence of conceit; and the predominant tendency of Autohegemony, which signifies an inordinate estimate of one's own capacities, is to revolt from accepting counsel from those who are eminently capable of affording it. Men who have enjoyed a long-continued run of prosperity, are apt to drift into the fatal idea that they are all-sufficient in themselves; and this is a quicksand on which many a man has been wrecked and ruined. It should not be forgotten that, when the clouds of adversity begin to settle down upon a man, the clearness of his mental vision is obscured, his mind is liable to indecision, and for the time being he is incapable of exercising that calm consideration which is necessary for an extrication from his difficulties. Then is the time to know the full value of a clear-headed wife or a disinterested friend. We should well weigh everything that is addressed to us, and carefully separate the wheat from the chaff, before pronouncing the whole to be worthless. A fool in motley once gave advice of the most valuable description. Francis the First, of France, was maturing the design of a descent upon Italy, and consulting with his officers as to the best plan for surmounting the difficulty of the Alps. Amaril, the court fool, listened attentively, and at length remarked, that it would be much wiser if they would endeavour to hit on a plan for bringing the army safely out of Italy. As the event proved, the advice was not unwarranted, though unheeded; for Francis I. of France was defeated and taken prisoner, and scarcely a man

of his fine army ever reached France again. Do not be deterred from soliciting advice in suitable quarters, from the fear that it will bring ridicule or contempt upon you; as a judicious application for counsel will bear with it quite an opposite impression.

Despise not Honest Labour, and be not too Proud to Work. As the pyramids were slowly reared stone by stone, so fortunes are seldom realised except by adding pound to pound and dollar to dollar. Let those who would leave their mark in the world pull off their coats, roll up their shirt sleeves, and set manfully to work. Do not waste idle thoughts of regret because your lot has, mayhap, been cast in the lowly walks of industry. The same sun which blisters the pavements of London, the vast metropolis of Great Britain, also darts its life-giving rays on the humbler roofs of New London in Connecticut. For a fair prospect of success it matters less what particular kind of occupation is adopted than the degree of spirit with which you fling yourself into the opening, and the perseverance which you infuse into the execution of your daily toil. The great Rothschilds have not attained to so high a pitch of eminence as to be able almost to avert wars and sway empires without a vast expenditure of thoroughly exhaustive toil. John Jacob Astor began life as a vendor of apples on the streets of New York. Stephen Girard, from insignificant beginnings, succeeded in amassing wealth. Commodore Vanderbilt started in life as a poor boatman. A. T. Stewart began business as a pedlar. Multitudes of men, sprung from the ranks, have attained eminence in the higher walks of science and literature. The great James Watt was at one time a working mathematical instrument maker. From the lowest round of the ladder Charles Dickens rose to the highest eminence in literature. Franklin was once a printer. Dr. John Hunter, in early life, was a cabinetmaker. Hugh Miller, during his early manhood, was but a working mason. Richard Cobden was a poor farmer's boy. Sir John Ross was once a volunteer in the English navy. Livingstone, in early youth, was employed in a factory. Professor Faraday was a bookbinder. In fact, hosts of successful men have risen from the humbler walks of life, brushing away, by industry and force of character, the social impediments to their upward flight, with which the peculiarity of their birth had essayed in vain to fetter their feet. Labour widens out the frame, welds together the bones, enlarges the organs of digestion and respiration, gives steadiness to the nerves, consolidates the fibres of the muscles, and bit by bit develops the boy into vigorous manhood, or shoots up the maiden into a blooming and healthful woman. Idleness utterly unfits its victims for the higher duties of life. Labour, directed with common sense, combined with judicious economy of living, and guided by untarnished honesty of purpose, rarely disappoints.

the investor of the prizes of substance, distinction, honour, and happiness.

Avoid Intemperate Habits. To ensure success in the struggle of life, it is absolutely necessary that you should retain the confidence and esteem of all with whom you come in contact. To do this it is peremptorily incumbent on you to cultivate strict habits of temperance. At starting you may be possessed of every other virtue under the sun, and yet, if you lack that of sobriety, you are undone. How suicidal is the folly of putting an enemy into your mouth to rob you of your senses. A drunk man will betray secrets which, in his sober moments, he would suffer martyrdom rather than divulge. Ere now, murder—murder of those nearest and dearest to the insane murderer—has been the result of indulgence in the accursed propensity for drink. Clitus was the bosom-friend of Alexander the Great, and once saved his life; yet the latter slew his preserver in a drunken debauch. Temperance averts disease, promotes happiness, and prolongs life. Louis Cornaro, the great hygienist of Venice, gives interesting details from his own experience. By temperance he banished from his frame the crudities of the stomach, fevers, and pleurisy, with which he was afflicted in early life; completely rehabilitated an originally feeble constitution, and lived to the age of 99 years. His wife, who subsisted in accordance with his system of plain diet and temperate regimen, survived him and lived to about the same age. Agesilaus, King of Sparta, lived on the very plainest fare. Philip of Macedon curtly refused the services of an otherwise brave and valiant officer, because of the latter's fondness for wine. Thomas H. Benton, a Senator of the United States, used to tell that he never drank a glass of liquor in his life. He had not the slightest idea of how a game was progressing when others were playing in his presence. This happy ignorance was no doubt due to his abstemious habits, as it rarely happens that intemperance does not lead to gambling. Crime can nearly always be traced to immoderate indulgence in intoxicating liquors. There must be no compromise with the demon of intemperance that stalks throughout the land. The tide of misery and crime can never be stemmed until the legislators of the civilised world pass stringent enactments prohibiting the manufacture of intoxicating liquors. As a medical man, I solemnly assert that there is absolutely no possible condition of the constitution of the human frame which renders imperative or even advisable the application of intoxicating liquors as a remedial alternative. As one having some acquaintance with chemistry, I insist, further, that there is no chemical or mechanical operation in which the liquor of which we are now speaking is used which could not be as efficiently carried on by the substitution of less treacherous

agencies. If these assertions are correct, the only plea for the continuance of the manufacture of intoxicating liquors is shattered to atoms. The American, Prussian, and other enlightened Governments would speedily follow the example that England might present to the world, by completely prohibiting the manufacture or importation of intoxicating liquors; and in time the world would be rid of an agency of evil which has wrought a thousand times more havoc than all the other sources of human woe combined. If you would tread the world in safety, in the meantime, you must shun the public house or tippling shop as you would shun the pest house; and remember it is the grossest self-deception—a deception which has dragged millions to their ruin—to fancy that you can handle pitch without being defiled.

Dress becomingly, and in accordance with your Business and Station. As you value the approval and esteem of the only kind of men whose good opinion is worth the winning, be careful to dress modestly and in keeping with your profession. The farmer who attires himself in warm homespun will be credited with sense and judgment by his friends; while his neighbour, who tricks himself out in all the fripperies of the city dandy, is rightly stigmatised as a fool. A blacksmith should wear clothes that dirt and rust will not injure; but it would be absurd and ridiculous for a music-master to adopt the garb of a stone-mason. Be dressed in material befitting your occupation, and you may have them as well made as possible, and of as good material of the kind as you can afford. It is distasteful to the master shop-keeper to have either fops or scarecrows behind his counters. When the dress of a clerk becomes elaborate and costly, he has himself to thank if he is suspected of surreptitiously sharing in the profits of the business. Charles, Duke of Burgundy, commonly wore a habit which cost two hundred thousand ducats in silver—an amount equivalent to two hundred thousand dollars, or forty thousand pounds of modern currency. As a contrast, the old Earl of Derby, who fought for Charles I., was commonly attired so modestly that by this mark he could be discerned at once in a crowd. The Emperor Bassianus Varius Avitus Elagabalus dressed in garments of gold and diamonds, clusters of jewels and precious stones adorned his shoes, and he made a point of never wearing a suit more than once. Sir John Arundel must have been a small fortune to his tailors; for when drowned in crossing the English channel, fifty-two new suits of purple and gold went with him to the bottom. A mind of another and far superior cast was encased in Marcus Portius Cato, who never had a toga on his back which cost more than one hundred pence. Lollia Paulina, a Roman lady, when attending a feast, was decorated with gold chains, pearls, carcanets, and diamonds to the value of

a million sterling; yet, with all her pride and wealth, she was as deserving of contempt as becomingly-clad Baroness Coutts is of merited commendation. Illustrations could be multiplied indefinitely, showing the beauty of modesty in dress, but the thing is so evident that it is needless to enlarge.

Have one Aim in Life. It is a truism that he who aims at nothing will generally hit his mark. The objectless saunterer, uncaring whither he is going, is more apt to tumble into mischief than his friend who is decided as to his intentions before he leaves his dwelling. If the captain of a ship forgets that he is to reach a stated port, and pays no heed to the course, he is likely to have a sorrowful awakening from his lethargy when his ship runs upon the rocks. A sportsman who fires off his fowling piece at random is less likely to kill birds than to bag a brother sportsman or a dog. And so it is with the young man who lounges through life displaying fitful efforts of energy without a definite aim. To avoid a useless existence, you must carefully select the chief object for which you are to strive. Follow this up with all your energy, and you will surely reach your goal crowned with honour and success.

Don't expect a Fortune to fall at your Feet. What is vulgarly called luck, has little connection, in its origin, with blind chance. Tact and industry have more to do in superinducing what is commonly termed a run of luck than any other agencies. Happy consummations are not brought about by fortuitous and blindly-acting forces, but are the results, in some way or other, of intelligent working and striving. It does, no doubt, sometimes appear as if particular individuals were singled out by fortune for the purpose of having showered upon their lucky heads an unstinted share of happiness and felicity; but the accident of the thing is only apparent and not real. Cases in point are those of Quintus Metellus, Lucius Metellus, and the Roman Emperor, Pius Antoninus, of the latter of whom it is written that he never left any mean or imperfect act behind him for the exercise of retrospective repentance. On the other hand, there have been people whom misfortune seemed to dog, and who, from the cradle to the grave, met with little but sorrow and disappointment. Henry VI. of England was unsuccessful in every enterprise in which he engaged. Franciscus Bufalus, an estimable citizen of Rome, was visited by a series of the most appalling misfortunes. Two of his sons quarrelled, fought, and killed each other. Other two perished as the penalty of conspiracy, while the fifth and last, murdered his mother-in-law, and his only daughter committed suicide. Of course circumstances arise over which we cannot, by any possibility, exercise any influence; but these are almost always of minor importance, and everything on which the general success of life

depends is more or less under our own control. The acquisition of fortune hinges largely upon the amount of energy and industry which we can bring to bear on the machinery of existence.

Let Everything you do be Done with Perseverance and Thoroughness. The two qualities of perseverance and thoroughness are the master keys to unlock the treasures of riches, reputation, and fame. To be on the threshold of success, and then to give up the enterprise, is infinitely worse than if no attempt whatever had been made; while to hurry through the work to the end in a slipshod and slovenly manner, is dishonesty. Moreover, a failure from either cause is sure to exercise a baneful effect upon future endeavours of the kind. The first fight of a young dog is a critical time, for if it be beaten, the chances are against its ever fighting successfully throughout the lapse of its cowering existence. If a young horse be overloaded and fail, he rarely forgets his want of success. The elephant that has once fallen through a treacherous bridge, will hardly ever cross another. Men, also, who have met with failure in their first attempts, are ever after incapable of doing as much as they might have done had they taken the necessary precaution to ensure, in their maiden efforts, a victory instead of a defeat. There is a young man of my acquaintance who is void of the qualities of thoroughness and perseverance to a saddening degree. He has never been known to carry out any undertaking in its entirety, although he enters on many with energy of such heat and intensity that it speedily burns itself down. He has never been known, in passing through a doorway, to close the door behind him. If he cuts a slice of bread his knife stops short before the incision is completed, and the slice is torn away to the disfigurement of the loaf. His mind is crammed with ill digested sprinklings of acquaintanceship with a vast range of subjects, about not one of which has he any ideas that are not crude and unfinished. For examples of a remarkable conjunction of perseverance with thoroughness, we may cite Alexander the Great, who never sat down before a city, and laid his plans for its capture, without realising his designs. Oliver Cromwell knew not what failure meant; and Gen. Grant, in the late sanguinary intestine strife in America, carried everything before him by thoroughness and perseverance. It is to these qualities that we owe the choice works of art which have been preserved to us from the time of the ancient Greeks, and also those which have been called into mimic being in more modern times. It is the steady lasting pace that wins the race of success. A fitful display of talent may shine like a meteor for a while; but unsustained by the qualities of perseverance and thoroughness, it waxes dim, and becomes extinguished before the race is well begun. It is not the erratic comet, brilliantly

flitting across the sky, that bids the earth rejoice, but the glorious sun itself—fitting emblem of steadfastness and perseverance—never tiring of shedding joy and gladness upon the world.

Keep a Brave Front in Adversity, and be not Inflated by Prosperity. A man's material success is accepted as the criterion of the power and ability with which he is endowed; and on the other hand, the frequency and extent of his failures are taken as evidence of a greater or less deficiency of working mental or bodily capacity. It is a fatal mistake to become too sensitive to the opinion of society. The cowering victims of an evil speaking world are no more masters of their own actions than is the weathercock on the steeple. Endeavour, therefore, calmly and steadily, to hold your onward course, esteeming the approbation of your own consciences at a vastly higher figure than the opinion of the world; showing no unseemly exultation when prosperity smiles, and betraying no weak chagrin when adversity frowns. Zeno, the celebrated philosopher of Cyprus, took to merchandise, but lost, one by one, the whole of his ships. When the last had succumbed to the waves, he thus apostrophised the fickle goddess:—"O, fortune, thou hast acted wisely in forcing me to throw off the rich attire of a merchant to put on the mean and despised habit of a scholar, and turning me back to the school of philosophy, where there is nothing to lose, and the most satisfactory and desirable things to be gained." Thus nobly bearing himself under the blasting of his cherished visions of wealth, he finally attained the highest pinnacle of eminence as a man of profound learning; and at his death his loss was mourned by king Antigonus II., and by all on whom he had bestowed the happiness of his friendship. There is nothing more surely indicative of nobility of mind than the preservation of calmness of exterior under crushing disappointments and calamities, unless it is the bearing of great prosperity without the inflation of pride, and with seemly modesty of soul. As the latter is perhaps the noblest spectacle of soaring manhood which we may gaze upon, so is there nothing more hateful and despicable than purse proud arrogance—the sure index of meanness and pusillanimity. Of the latter class we have a good illustrative example in Lepidus, who, when returning victorious from the African campaign, at the head of twenty legions of Roman soldiers elated with victory, encountered Octavianus Cæsar, who had just sustained a disastrous defeat at the hands of Sextus Pompeius. A surfeit of glory had proved too much for the weak mind of Lepidus; and he not only showed the cold shoulder to Octavianus Cæsar, but with a stretch of meanness hardly conceivable, he even incited his soldiers to hurl cowardly insults at a brave man under a temporary cloud. His despicable

pride had an early fall, however, and the blow was deservedly embittered the more by coming from the man he had so grossly insulted. After sustaining a crushing defeat, he was banished the Empire for his insolence and ostentation. Guard well against any display of vain glory in times of prosperity, and be not dejected by misfortunes or adversity; but let honest and manly fearlessness characterise every action of your life. However highly you may be constitutionally fitted for the calling you have chosen, failure is not beyond the reach of possibility; but if you can only bear these preliminary disappointments courageously, good, rather than evil, will be the outcome. These early failures are fatal only to the weak-spirited and cowardly. Demosthenes made a most signal failure in his first attempt at public speaking, and yet he became the foremost orator of ancient times. George Washington made a similar *début*, and Henry Clay's maiden speech was a ridiculous break-down. When Benjamin Disraeli first rose to speak in the British House of Commons, he made such a melancholy exhibition of himself that he was speedily laughed and hooted into silence. Before resuming his seat he said firmly:—"Gentlemen, the time *will* come when you *shall* hear me." He has for many years been regarded as among the first of British orators. Recently my attention was attracted to a fly which had lost its way and made a wrong turning down the neck of the water decanter, which stood on the table at which I was writing. I watched the proceedings of the little prisoner in its efforts to bring its accidental incarceration to an end. It rose from the water in the direction of the neck one hundred times, as I counted, each time falling back baffled and defeated. Perseverance, however, met with its reward at last, in the one-hundred-and-first trial, as it shot sheer up through the neck once more into open air and liberty. It is fatal to succumb at the first approach of difficulties, while to meet such with a manly front is to turn a seeming misfortune into a source of profit.

Do not Despise Little Things. To do so is to commit an egregious blunder. The vast universe is made up of molecules, conjoined so as to make up a grand whole. The little daily kindnesses we give and receive are more lasting in effect than magnificent benefits rarely bestowed. The ignited tobacco dropped from the Indian's pipe to the scorched prairie may cause the burning up of hundreds of square miles of grass and forest trees. Trifles often increase in scope and importance until on them hang the destinies of kingdoms and nations. A hare once caused the capture of a Roman city. While this city was invested by the Emperor Arnulphus, a hare was started close by the camp, and heading in the direction of the principal gate, it was pursued by a great number of soldiers, shouting and running

at the top of their speed. Seized with a sudden panic, the besieged abandoned their defences, and the hare hunters entered quietly into possession of them and the city. A trifling accident to L. Æmilius Paulus, the leader of the Roman army, was pregnant of results. Having been thrown from his horse, some officers and soldiers dismounted to render the necessary assistance. The rest of the mounted troops took this as the signal for a general dismount, and acting on this fatal misconception, the Carthaginian General was enabled to deliver the most crushing defeat the Roman forces probably ever received. For a trifle of Latin King Edward II. lost his life. Adam de Torleton, Bishop of Hereford, wishing to save the life of the young king, sent a message in Latin to his keepers:—"*Evardum occidere nolite timere homnum est*," which bears the translation "do not kill Edward, it is good to fear him." But by the receivers of the message it was rendered "do not fear to kill Edward, as it is a good act;" and this little mistake cost the king his life. The fall of an apple revealed to Newton the law of gravitation. The steam of the tea kettle led to the discovery of a motive power which has revolutionised the world. A little stick of wood washed up from time to time on the Portuguese shore, proved to Columbus that there was land to be discovered to the west, and was the introduction to a new world. The idea of the suspension bridge was first caught from the spider stretching her flimsy threads across a ravine. A common kite, in the hands of Franklin, disclosed the possibility of utilising the lightning itself. The heat of camp fires in the desert melted and ran together the particles of sand in a semi-transparent mass, and this trifling incident was the inauguration of the gigantic industry of glass-making. The operations of a diminutive musk rat of the Mississippi caused that mighty river to burst its embankments, inflicting damage on the surrounding country to the tune of thousands upon thousands of dollars. Recently a magnificent ship of war, which had cost the Government of the United States six hundred thousand dollars, was, by the boring propensities of a paltry worm, sent suddenly to the bottom, to be seen no more. There is more than appears on the surface in the saying—"Take care of the pence and the pounds will take care of themselves." The trifling incidents which go to make up the pence of life muster strong collectively, if they should be individually weak; and it is to their influence as used by ourselves that we owe happiness or misery in life.

Acquire a Taste for Sound Reading. In every age books have been the bosom friends and companions of the most highly cultivated and gifted of every clime. The world is now inundated with an enormous mass of literature. This literature may be divided into the Intellectual, embracing science, history,

travels, and writings of an educational or instructive character generally; the Moral, which, strictly speaking, is but a phase of the intellectual; and the Passionate or Emotional, under which heading come all the love tales of fiction. Of the two first named classes it would be extremely difficult to say too much that is good, while an equal difficulty would be experienced in finding expressions too strong for an adequate condemnation of the third class. The immoderate devouring of the ordinary novel produces intoxication of a certain kind as certainly as would its material prototype alcohol, administered through the channel of the gullet. It may probably be pleaded in extenuation that novel reading is almost universally indulged in among all civilised communities. The prevalence of the habit cannot, however, change the hue of its character. The Romans were passionately fond of gladiatorial butchery in the bloody amphitheatre. The Hindoos of India joyfully threw themselves under the wheels of the car of Juggernaut. Spain once rejoiced in the Inquisition, and she still goes crazy over an aimless combat between a padded matador and a spiritless bull. It would be but a sorry argument to suggest the prevalence of customs such as these in proof of their excellence. Why, by such a train of reasoning, murder has only to be pretty generally practised to be transformed into a praiseworthy and highly meritorious performance. The universal reading of novels is a propensity to be deplored and discountenanced. The bane of this custom consists in the intoxication with which it overbalances the system, and the distaste of truth which it engenders. Just at the season when youths are the most liable to be stricken down by the novel reading fever, their passions are already too strong, and stand much more in need of repression than cultivation. The taste for fiction is not lasting, but dies out after it has performed all the mischief it can; while, on the other hand, the appetite for intellectual and moral reading grows on what it feeds upon, and endures while the lamp of intelligence remains unextinguished.

Maintain an appropriate Bearing to Rich and Poor, and cherish virtuous Friendships. There is no individual so contemptible as the despicable sycophant who habitually cringes and truckles to wealth, and turns his back upon honest indigence and poverty. Carefully avoid conduct of this nauseating kind; let your intercourse with rich men be untainted with servility, and your dealings with the poor free alike from arrogance and the assumption of offensive patronage. In your friendships be discriminating, so as to avoid discreditable entanglements. There are people who delight in announcing in trumpet tones the great love and friendship they entertain for their neighbours; but truly the exhibition of their friendly feelings adopts a singular chan-

nel for its display. If persons of this class have any little bit of scandal, the discussion of which is calculated to afford you the deepest pain, they will be sure, under the cloak of consolation, to drive the iron into your soul. Real friendship is a very different thing. It abounds in true sympathy and delicacy of touch, and would suffer infinitely more than you would, were a tender part to be accidentally probed. Damon and Pythias are typical friends, the one having offered his life for the other. Epaminondas fought over the prostrate body of his friend Pelopidas until he was covered with wounds; and history gives numerous examples of friendships, touching in their complete abnegation of self. Yet, however admirable a thing is real and sincere friendship, young men ought to guard against cultivating indiscriminate intimacies which are generally very differently constituted; and those who are the most cautious in acquiring friendships realise more happiness when they are once formed, and are least likely to experience a waning of the feeling. Friends ought to be selected as the judicious reader chooses his books—not on account of handsome or respectable exteriors, but of the sterling qualities within. When you have once formed a friendship, be slow to bring it to a close, and do not be ready to to take umbrage or offence at every little peddling rumour that reaches your ears. Above all, adhere to your friends in the time of their adversity, as nothing cuts so deep as heartless desertion on the first approach of misfortune.

On Marriage, and how best to select a suitable Partner for Life. The subject of marriage presents an interesting field for philosophical research. It is a well established fact that the majority of the great thinkers and intellectual workers of the world have either remained unmarried, or found no happiness in the marriage state. I opine that the philosophy of these phenomena is, that when a man finds himself wedded to a loving and affectionate wife, his higher and manlier powers are lulled to sleep, and he spends his days in reciprocating those nameless endearments which undoubtedly are powerfully attractive and highly valued by the worshippers at the shrine of Hymen. On the other hand, those men who have had the tide of their affections dammed up, seem to have the whole of their life-force urged into the higher channels of the intellectual. The following examples illustrate the position here taken:—Thales, the eminent Greek philosopher, adhered to a condition of single blessedness. St. Paul remained unmarried. Socrates was united to a shrew. Lord Bacon remained single. Scaliger lived and died a bachelor. Shakespeare is said to have been unlucky in his choice of a wife. Milton's first wife ran away from him. Gibbon, a distinguished historian, loved, yet never married. Washington Irving remained a bachelor. Charles

Dickens, at an early stage of his career, was separated from his wife. John Ruskin has been divorced. Stuart Mill lived a widower for fifteen years before he died. Sumner and Horace Greeley, it is said, drew blanks in the marriage lottery. Rosa Bonheur, Harriet Hosmer, Florence Nightingale, Baroness Burdett Coutts, and Anna E. Dickinson—all of uncommon eminence—are single ladies. Do not, however, run away with the idea that it is my wish to depict the institution of marriage as a maelstrom to be avoided. Doubtless a fond and affectionate wife brings a world of joy and devotion to lay at the feet of the husband she adores. Perhaps some of you will remember the conjugal devotion of the Duchess of Bavaria, who carried Guelpho, her husband, out of the captured town of Wurzburg on her shoulders, and thus saved his life. Alcestus cheerfully died for Admetus, her husband. Julia fell dead on seeing the bloody garments of her husband Pompey. To those resolved to make the venture I would say, do not be caught by a pretty face. Pay some heed to the aspect of the mind as well as the beauties of the person, and let the foundation of your decision be rather a reciprocity of love and esteem than skin-deep beauty or the glitter of a well filled purse. June should not wed with January. Such unions are fraught with the most disastrous consequences. I have reserved the most valuable advice to the last. Consult an efficient examiner of character. Put yourself into his hands, and he will readily describe to you the form and intellectual endowments of the woman who is best fitted to crown your life and her own with usefulness and happiness. Thus guided by experience, philosophy, and science, you reduce to a minimum the risk of a *misalliance*.

In conclusion, bear constantly a manly part in the battle of life. Shun meanness and deceit. Practice sobriety and patience. Be true to yourselves and to your friends. Be ever ready, according to the abundance of your stores, to alleviate suffering and distress, and be certain that when you arrive at the close of an honourable, honoured, and useful existence, for you there will be a rich and glorious reward.

Dr. Simms' Books and Lectures may be had from William Tweedie, 337 Strand, London; J. Tweed, 11 St. Enoch Square, Glasgow; G. Mitchelson, 40 Nicolson Street, Edinburgh.

THE

PROPER CARE OF THE HUMAN BODY;

OR,

THAT WHICH IS PROMOTIVE OF

HEALTH, HAPPINESS, AND LONGEVITY.

A LECTURE,

By J. SIMMS, M.D., of New-York.

What are people most careless about keeping while it is in possession, and most anxious to regain when it is lost? This is no riddle; every one of ordinary observation will answer, "It is health."

Some through the formation of vicious habits, and others through sheer ignorance, allow the priceless treasure to slip away; and then they desire, and often desire in vain, that at any cost it may be recovered. As Shakspeare has happily expressed it, "How use doth breed a habit in a man!" So here is one who uses strong drink to such an unreasonable extent that intoxication ensues. This being often repeated, impairs the general health, and finally death supervenes as the retribution which God has kindly appointed to deter from vicious indulgence in the first place, and failing this, to terminate the woes of a life which has become intolerable. There again is a man who runs riot in his passional nature, his temper, for instance, being permitted to rise and exert such fearful sway that the elemental or bodily materials of his frame are burnt up, and life is destroyed. Another individual brings himself to an untimely end by that undue indulgence of his appetite that leads to the contraction of mortal disease. All these things are done every day through no deliberate preference for sickness and death, but through a thoughtless disregard of the certain consequences of the vicious indulgence. For when the constitution is shattered, the organisation hastening to dissolution, and pale death comes tapping at the house wherein resides one of these spendthrifts of health, how eagerly does the fond mortal clutch at the slenderest hope of recovery,

and with childlike docility submit to anything that medical skill can suggest as a possible alleviation of his sufferings and prolongation of his existence. It is too late to tell him *then* that had proper care been bestowed on that dissolving frame, health and vigour would have been the concomitants to an old age replete with comfort and enjoyment.

Besides the natural propensity of men to the excessive gratification of appetite and passion, despite their better judgment, there is a great deal of *ignorance* as to what will and what will not improve and strengthen the powers of life on the one hand, or lead to their destruction on the other. In our universities and schools of learning many sciences are studied and much valuable knowledge is acquired, but when the graduate leaves his *alma mater* he perhaps knows no more about taking care of his body and preserving its health than a child entering his teens. When one considers that health—vigour of body inducing energy of mind—is indispensable to success in every vocation of life, one sees that the care of it should be paramount to all other knowledge; and it becomes a wonder to the thoughtful mind that there are no schools in which the ordinary means conducive to bodily health are taught, and no provision made for imparting this knowledge in our great public seminaries. It is my purpose in the present lecture briefly to point out the manner in which the various parts of the human body ought to be cared for, and thus I shall endeavour to supply, in a condensed form, some of the valuable information which the public so greatly require, in the hope that some misery may thus be prevented, some distress relieved, and some life prolonged.

Let me first call your attention to the humblest and often most neglected parts of the human frame—the feet. No country that has any literature at all is without large volumes on the shoeing of horses, the size and form of shoe most suitable for them, and the general management of the feet of these useful quadrupeds. Yet, to the best of my knowledge, no single work has been published on the shoeing of human feet and the best methods of keeping them in walking order except one, and that not an exhaustive treatise, by Cowper, in 1781. It seems that our literary and scientific men, aspiring to nobler themes, have ignored or wholly overlooked these useful articles, required alike by the peasant and the prince.

In warm countries the feet are usually left bare, and thus preserved in all their primitive elasticity. In "Routledge's Illustrated Natural History of Man," the Rev. J. G. Wood has described the skin of the foot of a Kaffir postman as possessing toughness equal to the sole of a boot, with elasticity in superior perfection. It is added that "he will walk with unconcern over

sharp stones and thorns which would lame a European in the first step, and has the great advantage of possessing a pair of soles which never wear out, but actually become stronger by use."

In colder climates, as in the northern regions of America and the European continent, the feet require some sort of covering. Yet I have seen hundreds of men and women in Glasgow go barefooted all the winter, and when I asked them if their feet were cold, they replied negatively. The necessity for keeping the feet warm arises from the fact, that these important members of the human body are the most remote from the heart, and as the circulation decreases in force in proportion to this distance, a certain degree of warmth must be maintained to assist the circulation of the blood through the capillaries of these extremities. Moreover, it is important to secure a due amount of perspiration from these important emunctories. Sandals were formerly much worn as protectors of the soles of the feet, as was the fashion of the ancient Greeks, while some of the Celts (Kelts) tied pieces of horse or ox skin about their feet for the like purpose. The Indians of North America wear soft deerskin mocassins, which form a very safe protection against the rigours of their climate. These mocassins have the advantage of being quite loose, thereby permitting the free circulation of the blood. I have in my possession a pair of deerskin boots from Siberia greatly resembling the buckskin mocassins of the North American Indians, especially in being loose and soft to the foot. It might seem useless in this brief lecture to introduce lengthy arguments in favour of loose shoes, or to demonstrate that the feet are often injured by tight ones, also that high heels, by inclining the foot forwards, thrust the toes into the narrowest part and occasion corns, which, to say the least, are very unpleasant. Moreover, where tight boots are employed, the necessary ventilation by which the air should pass freely in and out is rendered impossible. Dr. Fuller, in his History of Berwick (page 306), mentions a case in which death was occasioned by tight boots, and the writings of Strutt record similar instances. Tight shoes and boots dispose the toes to over-ride each other, and thus grow into deformity, as is often seen among tight-booted gentry. The French apprehend such evil consequences from this over-riding of the toes that they have instituted a process of webbing for the feet of the soldiers. Strips of linen are woven among the toes, above one and below the other alternately to keep them perfectly apart. The sole of a shoe should be made of the exact form of the foot, which may be effected by placing the foot on a piece of paper and drawing a mark round it for an outline. Though the most serious consequences result from small shoes, yet, on the other hand, they

will chafe the foot if too large. The material ought to be compact so as to exclude damp, yet soft and elastic to admit of easy motion. Clogs—that is shoes with wooden soles—are much worn among the operatives of the northern counties of England, but they necessarily militate against the elastic spring of the foot, and must therefore be injurious.

If your feet are liable to profuse perspiration, wear socks or stockings of cotton, because this material being a conductor of caloric, will carry away the surplus heat which produces perspiration. Wool is a non-conductor, and hence, when the feet are cold and dry, hosiery of this material is most beneficial. The feet ought to be washed often, and the nails neatly pared. Without frequent ablution they will become offensive from the effluvia they emit and the effete matter which is sure to accumulate about them. Daily washing with cold water, if you are in a healthy condition, will not prove too trying, and it is the best rule for general adoption. If you do not wash them every day, endeavour to do it once a-week. If you lack the time or inclination to perform this duty every week, then manage to overtake it once a-month. If that even seems too often, pray give them an ablution once a-year; and if not even that, by all means, and for the sake of suffering humanity—your own and others—contrive to wash them at least once in a lifetime. Many a husband is loved and even adored until the unlucky moment when he pulls off his boots in the presence of his keener smelling half and the obnoxious perfumes reach her indignant olfactories. "Oh, dear me, you disgusting creature!" is now the ejaculation of her who never before used a less tender epithet than "My dearest," "I never will sleep with you till you wash those feet!" Take warning, men, and attend to your pedal extremities.

When corns are formed on the feet, which may happen through the boots being either too large or too small, the best cure is to pare them down neatly, but not so as to draw blood; then lubricate them with olive oil, and wear very soft, comfortable, and low-heeled boots for the remainder of your natural life. Remember, tight ones ever are *hostis generis humani.* Soft, easy shoeing is likewise the best remedy for bunions.

The lower limbs should be clothed in warm apparel. It is too common to dress the limbs much more thinly than the trunk of the body. This draws the blood around the vital organs within the chest, and often gives rise to congestion of the lungs, inflammatory complaints, palpitation of the heart, aching of the head, and coldness of the feet, all of which might be prevented by clothing the limbs warmly and the trunk more sparingly.

We now come to consider the abdomen, stomach, and bowels, with the rational treatment of these important viscera. Some-

times these parts get into a cold and weak condition, in which case relief may be obtained by wearing several folds of new flannel neatly swathed. Friction is likewise highly beneficial; it accelerates digestion in the stomach, and assists the peristaltic motion of the bowels. But that which is of the greatest importance with reference to these organs, is not so much what may be done externally to promote the exercise of their functions, but that which we put within in the shape of food to be digested and assimilated.

Food is of two kinds, liquid and solid. After air, the first requisite for the support of life is liquid food, without which no one can long survive. A man weighing 180lbs. carries in his body about 70lbs. of solid matter and 110lbs. of fluid, from which it is easily inferred that he should use much more nourishment in the liquid than in the solid form, in order to feed the body according to its natural proportions. Yet Mr. Wood, the miller of Billericay, in Essex, England, lived a long time in good health without imbibing any liquid whatever. The reason was, that his body, ventricose and aqueous, contained such a large quantity of fluid as formed a reservoir to sustain him. He used no salt while abstaining from liquids, and this abstinence proved an important auxiliary to his corpulence, in enabling him to live on solids alone.

Water is the most wholesome for persons of mature years; and if the stomach is weak, it had better be used warm to give tone and vigour. Barrow, in his travels in China, states that water used in diet among the Chinese was always boiled and generally used warm. Alexander the Great allowed only boiled water to his soldiers, with the view that it was purified by the process, which is true, no doubt, to a certain extent, in case the water is very impure. Milk should not be used by persons who are scrofulous, because it feeds those humours in the blood and increases the evil tendency. Drink, of whatever kind, should be used only to allay thirst; it is a pernicious, though common practice to imbibe quantities of liquid at every meal. And as for the large potions of tea usually swallowed every morning and evening, we cannot do better than quote a passage from the *Glasgow Citizen* of March 15, 1873:—"If the good folks of Dundee can eat or drink without a qualm after the pleasant disclosures made in their journals this morning relative to the articles sold by shop-keepers who supply their households, they must possess nervous systems of unusual strength. The superintendent of police has had a number of samples of meat and drink in daily use analysed, with the following cheerfully re-assuring results:—Out of eighteen samples of tea, some of them purchased from the largest warehouses in Dundee, there was not one sam-

ple of pure tea amongst them which was not more or less adulterated with Prussian blue, black lead, starch, turmeric, carbonate of lime, china-clay, and terra alba, or one or more of these articles. . . . Families may thus have their stomachs completely blackleaded, tinted a beautiful blue, delicately titillated with lime, or lined with china-clay, while innocently partaking of the 'cup that cheers but not inebriates.'"

Alcoholic and intoxicating liquors should be avoided by all persons in health, not only because they debilitate the nervous system and impair the moral character, but by reason of their being mingled with various poisons which tend to shorten life. Dr. John C. Draper, a chemist in the city of New York, was employed to analyse several samples of various kinds of liquor obtained at the best saloons and drinking-bars in the city, and he pronounced all, or nearly all, of them to contain fusel-oil in the proportion of at least two per cent., besides other poisonous ingredients. This fusel-oil is produced by continuing to still the grain after the alcohol has all run out, and it is a deadly poison. The deleterious stuff is not confined to America, but has been detected in those large cities of Britain in which the usual strong drinks have been subjected to analysation. The *North British Daily Mail* of April 11, 1873, informs us that Dr. Macadam's report concerning six samples of whisky was, "that two were highly watered and two others less so, while in all there was more or less fusel-oil." This is probably the reason why those who habitually drink these liquors prove unable to cope with the attacks of disease which are surmounted by abstainers. Their systems are so full of poison that they succumb immediately, the constitution seeming to make no effort to gain the victory. The four royal Georges of England afford a striking illustration of this assertion. Three of them at least were addicted to the use of ardent spirits. The first was notoriously a drunkard, and he died suddenly of apoplexy. The second was little better, and he expired with similar suddenness through the bursting of the right ventricle of the heart. The third was reputed a temperate man, at least after he attained to middle life; but the insanity which clouded his declining years was probably due to the intemperance of his forefathers. The fourth George suffered severely from gout besides other diseases, and for several years before his death his once handsome person was so bloated and disfigured that he secluded himself from public gaze, and could not bear to be seen, except by his necessary attendants and a few choice companions of his debaucheries. Princes, nobles, statesmen, and scholars, have alike perished beneath the baneful influences of the poisons imbibed in alcoholic liquors. In the *New York Commercial Advertiser* of July 9, 1872, there is the

following brief record of one who might have shone in the circles of the learned:—"James Duffy, a graduate of Trinity College, Dublin, who was popularly known as 'Old Jemmy,' and who had been for eighteen years a constant inmate of the Tombs on account of habitual intoxication, died there yesterday from general debility, at the age of fifty years." Thomas Francis Meagher, an eloquent young Irish lawyer, who was obliged to leave his country on account of the prominent part he took in the Young Ireland movement about the year 1847, came to an untimely end in America by falling from a steamer in a state of intoxication. Edgar A. Poe, the brilliant American poet, died in a drunken frolic in the streets of Baltimore. Daniel Webster doubtless abbreviated his life by the too free use of intoxicating liquor; and Stephen A. Douglas sank rapidly when attacked by disease, probably from the same cause. Thousands on both sides of the Atlantic have sacrificed their noble lives to an inordinate appetite for stimulating beverages. On the European side, however, these things are not allowed to transpire in the case of eminent individuals—at least they are not permitted to be so clearly understood that one might quote them as examples. As an instance in point, an eminent architect, in a large town of Ireland, hired an outside jaunting car one Sunday, and drove with some friends to a watering village a few miles distant. On their return in the evening he fell backwards off the car, and died almost immediately from a broken skull. The report of the coroner's inquest given in the public journals represented that the deceased gentleman was quite sober, whereas it was a well-known fact that he was quite drunk, and that no sober man could well have fallen or been thrown off in the same direction. But no newspaper would have dared to publish anything so discreditable to one holding a high position in the town. It is through this natural enough tenderness for the memory of the respectable dead that the public do not receive so many wholesome lessons as might be afforded by the catastrophes which happen in high life. Now, if we set aside the use of all liquors of an intoxicating nature, we only do what reason and conscience sanction, and what the suffrages of the world will eventually accomplish.

There are many evils arising from the use of improper food in the solid form, and a few words upon this subject may not be amiss. Nearly all the ancient physicians as well as the modern have recommended strict attention to the regulation of diet. Hippocrates, Celsus, Galen, Aretæus, and others, depended largely upon this for a cure of every disease.

Of all things eaten, there is no article more injurious than that which is most common, namely, bread of fine wheaten flour.

Wheat, if ground and baked without bolting or sifting, makes wholesome bread, because the system receives the glutinous or animal portion, which is the outside, as well as the starchy or vegetable substance which forms the central body of the grain. Nature has united these two in the wheat for a wise and healthful purpose, and he who separates them by bolting, and eats the one while he discards the other, will surely suffer from some of the various maladies which are chastisements appointed by the universal Parent for the correction of his erring children. The bread of unsifted wheaten meal will keep the bowels in proper condition, and conduce to that healthful action of the brain which we call clear-headedness. The keeper of the North Prison in Glasgow, where several hundred men and women are confined, informed me that he fed all the prisoners on bread of unbolted flour without flesh meat; and that they were all in good health, free from the boils and neck-sores with which they were formerly afflicted when fed on fine bread. Oatmeal, so largely used in Scotland in porridge and cakes, is an unbolted article, and has advantages similar to the wheaten. So has ripe fruit. Rye bread has been reckoned unwholesome, and *Chambers's Journal* gives an account of large districts of country having become depopulated and their domestic animals destroyed through its use as a predominant article of food. This arose from the smut of the excrescence called the ergot of rye, which is not very easily separated, and which produced a kind of gangrene on the fingers and toes often proving fatal to life. A powerful motive, however, appeared to induce a careful purification of the rye, when, in 1845, it was discovered that ergotine, which is made from this fungus, was a powerful agent in arresting hemorrhage, and that the poisonous matter was, as the basis of a medicine, much more valuable than the rye-flour itself. The Germans use rye-bread very extensively, and consider it both wholesome and palatable.

There can be no definite rule laid down to regulate the quantity that should be eaten by each individual. A man with a large mouth and stomach may devour with impunity what would be sufficient to sicken a small mouthed man with a diminutive stomach. When to eat depends largely upon climate, age, occupation, and other circumstances. When the Romans were most distinguished for physical prowess, they ate five times a-day. So do many Londoners now; and so do the passengers on board the steamers which cross the Atlantic, provided they are not sick. If the stomach is weak, the heartiest meal should be taken in the morning, and lighter ones towards night. Cardon states that he has inquired of several persons who had attained a hundred years of age, and they all ate lightly towards bedtime.

It is desirable to refrain from taking too many kinds of food at any one meal, because the greater the mixture of diet the more difficult it is of digestion. Dyspeptics ought to eat frequently, because thus the stomach is less oppressed and can perform its digestive functions more thoroughly. Complete rest from labour both of body and mind for an hour after each meal is very desirable. Two processes requiring concentrated power cannot be efficiently carried on in the body simultaneously, therefore none should attempt close study any more than active exertion while the stomach is fully occupied with a plentiful repast. Sleeping immediately after eating allows the full force of the vital powers to act upon the food received and secures thorough digestion. When the digested material is absorbed from the intestines through the chyliferous lymphatic vessels, and passes through the thoracic duct to be poured into the blood in the left subclavian vein, near the lower part of the neck, thence to be carried to the heart, from which it performs the rounds of circulation, while the crimson flood imparts material and strength and health to the entire system. If food is properly assimilated, which sleep largely assists in effecting, there is nothing in the animal economy more conducive to health; for there is far more depending on the amount of life-force exerted in the thorough comminution or solution of the food than in its transmutation or elaboration throughout the various portions of the organisation. My maternal grandfather, who lived to the age of 93, generally took a sleep after dinner every day, and his widow, who still survives (1873) at the advanced age of 98, retires early to rest, and is very regular in her habits. Her sister lived a hundred and one years. All these three were accustomed to very plain living in their early years as well as in the extreme old age which has been their portion.

The care of the lungs and air-passages affords a wide field for thought and reason. In large cities a very heavy per centage of the deaths are due to some of the many diseases to which these organs are liable; while in the rural districts numbers annually pay their last tribute to nature by resigning to the fell disease consumption. Assuming the importance of the part which the lungs play in the great drama of physical life, I shall at once proceed to consider what is salutary and what deleterious to them without entering into any details respecting their anatomical structure and functions.

While the lungs are yet tender, and the epithelium which lines them is soft, as in young people, great care should be exercised with respect to the air they are permitted to inhale. The atmosphere of large cities is rendered more or less impure by the carbonic acid gas emitted from fires and exhaled from the lungs of

men and animals. For this reason it is not so salubrious as the air of rural districts; besides, that defective sewerage, impure gases arising from sewers and sinks, decaying animal and vegetable matter, conspire still further to vitiate the atmosphere of large towns. Infants, being more tender and fibrous, are far more susceptible of the influences of air upon their lungs than adults, and should have greater care in proportion. The large mortality of children under two years of age in London, and more conspicuously in Liverpool, Manchester, Glasgow, and Dundee, may be ascribed to the impurities of the atmosphere rather than to parental neglect, because, in the new streets of these towns, there is much less disease and mortality than in the older parts. The quality of air should be chosen and due attention paid to ventilation, not for children only, but for those passing along the maturer stages of human life. To insure a full supply of fresh air for breathing, it is desirable that every person should exercise, either by riding or walking in the open air out of town, at least once a-day when the weather is favourable. Every house should be furnished with ample means of ventilation in each apartment. Pipes could be introduced beneath the stove or fire grate, connecting the air of the room with that out of doors, so that through this tube the air might enter and become warmed by the fire in suchwise that the inmates need not take cold. A rolling slide ventilator in the top of the room would serve as an escape for the impure and exhausted air and the exhaled poisonous gases which must more or less impregnate close apartments in which human beings are breathing. Sick-rooms obviously need ventilation; but ignorant nurses, in their anxiety to exclude cold drafts, often aggravate the disease, and prolong the sickness even to death by keeping the apartment too close. None should rashly throw open the doors and windows of rooms occupied by invalids; yet nothing is of more importance to them than a due supply of fresh air. Rome once had a school of physicians called methodists, who considered the air we breathe to be of as much importance as the food we eat, if not more; and in order to afford their patients the benefit of an uncontaminated atmosphere, they ordered them to be carried into grottos and other shady places where cool air could be found in its pristine purity.

In healthy persons the air of night, especially the early part of the night, agrees well with the lungs, because the gases and various effluvia which rise during the latter part of the night have then been swept up by the heat and have got out of reach; but they are brought down near the earth by the cold air of early morning, and if then inhaled, they transfuse their poison into the blood and debilitate the whole system. Much may be

done towards escaping fever ague by avoiding the malaria which gathers near the ground in the night season. Therefore those who reside in districts where this disease abounds should be careful to keep out of the open morning air.

To those whose lungs are weak the atmosphere of high lands will be found of great service. Chest-protectors of thick flannel will be found advantageous; and the whiskers and mustachios should be worn entire as nature has caused them to grow for a wise purpose. They serve to protect the lungs from dust as well as from cold, as is experienced in many occupations. Nail-makers, for instance, find these natural appendages a valuable protection against the minute particles of iron that float around, and would occasion mischief in the lungs if inhaled with the atmosphere.

The nose and nasal air-passages are specially liable to that inflammation of the mucous membrane which is usually occasioned by cold, and is called catarrh. Nasal pharyngeal catarrh is a very common complaint in America; and somewhat prevalent also in the British isles. Washing the head and neck with cold water is beneficial as a preventive, and wearing crape over the face is a good protection from those cold draughts which occasion it; but to overcome this malady when it has once become firmly established in the system is no easy matter, and generally presents formidable difficulties to medical skill, resisting all the usual remedies. In such cases a removal to a warmer climate is most likely to be serviceable. There have been instances of cure by drinking freely of water; but other cases have been only aggravated by this method. A man at Green Bay, America, cured himself of nasal catarrh by snuffing cold water freely through the nostrils, and washing his head and neck with the same cooling liquid several times every day.

The mouth, which is the great entrance to the stomach, and where digestion commences, should be carefully kept in a cleanly condition. One aid to this is to wash the teeth with a tooth-brush after every meal. Old and decayed teeth should be extracted, as they poison the food which passes under their masticating power. The wrenching of a tooth from the jaw certainly gives momentary pain; yet how much better is it to endure this than to sow the seeds of disease in the constitution by retaining decayed molars. The mouth should generally be kept closed, except when speaking, eating, or drinking; for if habitually open, the contact of the air and the impure gases, especially of a city, will occasion an early decay of the teeth. Acids and saccharine matters are particularly injurious to these useful instruments. As in printing a book, it is necessary that the manuscript be well written, so in digestion is it essential

that the teeth be sound, because through them the first process has to be accomplished, and this failing, we may look in vain for such good blood as will impart health to the entire system.

We now come to consider the care which should be bestowed upon the eyes—the most important of all the special sensational organs. The loss of sight in very many instances may be traced to the abuse of these delicate organs, or injury sustained by them, as in the case of Homer, Milton, William H. Prescott, Fenimore Cooper, and others. Overstraining or excessive use of the optics by reading small print, or pursuing an occupation demanding close and severe use of the sight, will often prove fatal, especially if such employment is pursued by gas, lamp, or candle light. Those who read or write much should maintain as upright a position as possible, because in a stooping posture the eyes become charged with blood, and its unhealthy humours become deposited in the region about them, thereby producing inflammation and leaving weakness behind. A hot fire directly in front of the eyes has the same tendency, and so has reading in a horizontal posture. Too strong light of any kind is injurious; and a flickering one has often proved ruinous to the sight. Much straining to discern distant objects should likewise be avoided. But the too common custom of confining children within doors is injudicious, because the eye is not early enough accustomed to form a proper focus for distant objects. Violent rubbing of the eyes is apt to produce severe inflammation. On the other hand, to wear a shade while reading or writing, is a good protection; and if inflammation has taken place, it may be allayed if not entirely removed by the application of cold brine to the closed eyelids. The brine, or salt, stimulates the nerves and opens the pores, while the cold contracts the blood vessels, both of which processes tend to subdue inflammatory action.

The ears, as the organs of hearing, are more or less liable to derangement, and demand from us a few remarks upon their care and treatment. A common practice among mothers is to remove wax from the ears of their children with a pin, which is highly dangerous, for, unless done with great care, the *membrana tympani* may be impaired, and the hearing entirely destroyed. Washing out the wax with soap and warm water is a more eligible method; and if the wax appears to be impacted, a few drops of olive oil should be dropped into the ears every night on retiring to rest. Pulling a child's ears, or striking them, is a practice to be severely reprobated, because the drum or *membrana tympani* may thus be ruptured, and the ear rendered useless for life. Ear-ache may be relieved, if not cured, by bathing the feet in warm water; and, be it observed, that sudden changes from heat to cold are injurious to the ears, as indeed to all parts of the human organisation. The

eustachian tube, which conveys air through the mouth to the internal ear, sometimes becomes obstructed, and causes partial deafness; to remedy which, the person so affected should hold the nostrils while he closes the mouth, and then endeavour to blow all the air in the lungs in the direction of the nose. This effort will often cause the eustachian tube to open with a snap, and the hearing instantly returns with its natural vigour.

The head should be washed every day in cold water so as to saturate the scalp completely; it should then be rubbed with a coarse towel, and brushed until nearly or quite dry. This daily ablution ought to extend round the neck and ears, and it had better include the whole body. The silly practice of washing the face several times a-day may be fashionable cleanliness, but it brings the blood to that part, and, of course, the humours with it, to break out in pimples, boils, and other eruptions. Whereas, if the face is washed no oftener than the rest of the body, it will not be subject to pimples. Once a-week to wash the head with soap and water, then thoroughly rinse out the soapy water, is beneficial to the hair, and is besides a cleanly and salutary practice. Washing or bathing the entire body is one of the best preventives of taking cold. It removes the excreted matter thrown out by the pores, strengthens the skin, and assists digestion. The complaint commonly termed a cold is occasioned by the closing of the pores so as to prevent the insensible perspiration from exuding from the body through its natural channels. This condition produces more or less fever, and this fever is termed a cold, because a severe or sudden chill is that which usually closes the pores.

Cold bathing is especially serviceable for strengthening the pores and muscles, and assisting the former to keep freely open. John Howard, the celebrated philanthropist, found that the performance of such daily ablutions enabled him safely to visit those hospital wards in which the patients were labouring under contagious diseases. The morning bath strengthened the system, and fortified the skin against the absorption of aerial impurities. Indeed it may be doubted whether any practice is more conducive to physical strength than regular bathing. Fabricius informs us that when Rome was in her palmy days of glory, there were 856 public baths in the city, and some of them large enough to accommodate 1800 persons; but when her baths became neglected, Rome began to decline, and at the present day the traveller gazes with wonder and admiration on the ruins only of those vast establishments that once were in full working order. Every large city should be provided with public baths, accessible at a cheap rate; and for London it would not be difficult to bring sea water, quite pure, from the coast sufficient to supply any

number of baths for its teeming population. Personal cleanliness may be regarded as a virtue, characteristic of a high degree of civilisation. It is remarkably promotive of morality, and exerts a chastening influence over every thought and act of the life. When a man becomes dirty, his moral sensibility is blunted, and his moral status lowered. He feels as if he could do a low and mean action, and often in thought indulges in the contemplation of something low and debasing. Hence, cleanliness lends an improving hand to society, shames crime always from her lurking places, and banishes sin into dirty localities, to be driven forth again by the hand of the purifier.

The question is often asked whether warm bathing is advisable, and to answer it might occupy an entire lecture. But suffice it here to say, that persons of delicate constitution, who have little natural heat, had better use warm water, and not bathe too frequently. The cold fluid lowers their blood-temperature too much and hence follows languid circulation, weak digestion, and impaired activity both of body and mind. Likewise, when old age advances, and the secretions become less active, producing harshness about the skin, a warm bath for half an hour in water at from 95° to 98° Fahrenheit, daily, or two or three times a-week, will lend a supporting and renovating influence to the failing constitution. Dr. Darwin recommended warm baths to Franklin, who adopted and continued their use with happy effects as long as he lived. The ancient inhabitants of Mexico were accustomed to the general use of the warm bath; and the Egyptians at Grand Cairo have the finest vapour baths in the world. In that warm climate, as in Rome, where the people are comparatively idle, the warm bath does for them what they fail to accomplish by active exertion—it supplies caloric to the system, accelerates the circulation of the blood, and gives a measure of youthful vigour to declining years.

Warm bathing has been used for the insane with great advantage in Prussia and France, and is now coming into common use in America for the same unfortunate class. The whole body of the patient, except the head, is immersed in warm water, in which he is allowed to remain until he falls asleep. This is found to quiet and balance the nervous system, and thus contributes essentially to the cure of lunacy.

It is often asked what time of day is the best for bathing. The answer is, whatever hour is found on trial to be most pleasant and beneficial; for it seems to be a matter wholly dependent on peculiarities of constitution. One man finds most benefit from a bath at two o'clock in the afternoon; another can bathe with advantage only in the morning before breakfast; a third receives the greatest assistance from a warm bath one hour after his best

meal. Yet there are those who find it difficult to bathe with a full stomach. Titus, the Emperor of Rome, for instance, could not use the bath after eating.

Exercise in the open air is another great requisite for the preservation of health; but the kind and amount which is proper for each individual must be determined by his own experience. Generally speaking, it is improper to use violent or prolonged exercise soon after a meal, because, as we said with reference to study, the entire vital force is needed thoroughly to carry on the processes of digestion and assimilation of the ingested material. I shall, however, treat more exhaustively of exercise and its advantages in another lecture.

The natural and healthful means of recuperating the exhausted energies of the human frame is rest and sleep. It has often been observed that persons who live to an advanced age have been sound sleepers. On the other hand, it is impossible to preserve the body in health without a fair amount of this restorative, and the want of it has often been known to produce insanity. Perseus, King of Macedon, being defeated and taken prisoner by Æmilius, was guarded in Rome by soldiers, who had strict orders not to allow him to close his eyes, and the consequence was that he pined away and died.

Every person should sleep in a pure atmosphere, which can be obtained through a ventilator or a lowered window; but any draft should be studiously avoided. When restlessness is caused by excessive perspiration, it may be obviated by lifting the bedclothes and allowing the air to have free access to the person for a few minutes. During sleep, the head should neither be bolstered too high nor should it be laid too low. If a thin pillow conduces to the comfort of the sleeper, let him use it by all means. Those who find it difficult to go to sleep should rub the body well with the hand before retiring to rest. The friction serves to equalise the nervous currents and so promote the general circulation, drawing away the blood from the head. A certain amount of coolness is requisite in the brain to close the ganglions together and produce sleep. A drink of milk or a light supper before retiring will often serve to induce the much needed repose. Dryden has thus beautifully apostrophised sleep:—

> "O, sacred rest!
> Sweet pleasing sleep! Of all the powers the best;
> O, peace of mind! repairer of decay!
> Whose balms renew the limbs to labours of the day;
> Care shuns thy soft approach, and sullen flies away."

Such are a few of the ordinary means of health. Let us care for it as the great bond and mortgage of life, and cherish it in such a manner that its preservation shall cheer us in life's course;

showering joys on the way, and renewing annually the lease of our existence until we attain a ripe, old age. And let us so live, eat, exercise, dress, act, and rest, that above all an honest and healthy conscience, as well as vigorous bodily health, may accompany us on the allotted journey of life; that we may shed blessings upon others as well as be happy ourselves; and finally, when the time arrives for the spirit to "shuffle off this mortal coil," may no regrets cleave to our retrospect, but may our memories then recall a life of usefulness, spent in well-doing wherever our days have been passed.

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ANIMALIMITATIONALITY

AND

MENTIMITATIVENESS;

OR

ANIMAL AND MENTAL IMITATION,

AND THEIR

TENDENCIES AND INFLUENCES ON SOCIETY.

A LECTURE,

By J. SIMMS, M.D., of New-York,

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1873.

[THE subjoined lines were voluntarily written by the Rev. S. H. Hodges, and presented to Dr. J. Simms, while the latter was delivering a course of lectures at Greensburg, Kentucky in May, 1860, his life having been threatened by those who cared not to tolerate an order maintaining man amongst them. Dr. Simms politely requested several drunken men (who were making disturbance during his lecture) to leave the lecture-room; they left, yet boastfully threatened the Doctor's life when out of his hearing]:—

Stand, as the anvil to the stroke,
And boldly advocate the truth;
Though friends should praise, or foes provoke,
Instruct the aged and the youth.

Go, if your way be strewed with flowers,
Or if you meet with flint and steel,—
He cannot rest in shady bowers,
Who has a heart for man to feel.

May science decorate thy brow,
And wisdom guide thy thoughts aright;
In rev'rence to thy Maker bow,
And make his precepts thy delight.

The man of science does not live
To gratify a sordid self,
But ever seeks to man to give
A treasure better, far, than pelf.

Instruct your fellows how to shape
A character for happiness,—
What is the proper course to take,
To save themselves, and others bless.

Like Newton, Humboldt, Franklin, stand—
The friend of science and of man;
Impress your footprints on the sand,
Whate'er may be the public ban.

The man of science is not dead,
E'en when his mortal body sleeps,—
The friend of virtue need not dread,
That no fond heart his mem'ry keeps.

His words will speak when he is gone,
His works a monument shall be,
Even when his soul has reached the bourne,
And rests 'neath life's ambrosial tree.

ANIMALIMITATIONALITY

AND

MENTIMITATIVENESS;

Or Animal and Mental Imitation, and their Tendencies and Influences on Society:

A LECTURE

By J. SIMMS, M.D., of New York.

There is, perhaps, no human being who does not, to some extent, and in some direction, imitate his fellows. This mimic propensity is of incalculable value, since, without it, the right living of noble souls would be no longer exemplary but merely phenomenal, and any improvement in the conduct of business, politics, and the arts of life, would be valueless, save to the improver himself. Every individual would thus be thrown exclusively upon his own narrow resources, and the civilisation of the race would be impossible. And yet, imitation, like every other faculty, has its dark as well as its favourable aspect; for it may be exaggerated into servility, or perverted by an imperfect or vicious model into folly or crime. In the succeeding portion of this lecture some of these perversions will be considered at length, under the title—Fashionable Follies and Crimes.

It appears, then, that to profit by the imitative propensity we must seek for worthy exemplars. In politics, we must look for them among statesmen and patriots; in society, we shall find them in the good, the polite, and the wise; and in art, they will present themselves in the multiform aspects of nature. The Greeks, above all others, studied art in the creations of God rather than in the canons of critics; and it is to this fact that they owe their artistic pre-eminence. The perfection of Myron's celebrated bronze statue of the cow and sucking calf was due to the life-like imitation of nature, as we find in the brilliant epigram in which it was applauded by an ancient poet—

> "This heifer was not cast, but rolling years
> Hardened its life to what it now appears;
> Myron unjustly would the honour claim,
> But nature has preceded him in fame."

Nothing is easier than to determine a person's social position by the voice, articulation, and gesture; for in all these every grade of society has its distinctive manner, which is always more or less copied by those who belong to it.

Imitation is based upon observation, and to that extent, at least, demands the exercise of mind; yet the degree of intellect which it requires differs so widely, according to the objects to which it is directed, that I shall, with reference to those objects, consider it as animal or unintelligent, and intelligent imitation. The former, which is chiefly instinctive and automatic, is indicated by width across the mouth, and is possessed not only by man, but by some of the lower animals—as the sheep, monkey, and dog. If the bell-wether leaps a wall, or chooses a particular path, all the sheep of the flock follow his example—not as an intelligent act of choice, but in virtue of an imitative impulse, which is almost entirely automatic. This blind following of a leader which we see in sheep, cattle, and other animals, is not unlike the gregarious tendencies of those vulgarians who are never satisfied except as they join the crowd which is led by some popular chief. The imitative powers of the monkey are well known and often very amusing. It is related that one of these animals, seeing the guests at a hotel go to the rack for their hats as they emerged from the dining-hall, followed the prevailing fashion, and placing a gentleman's hat on his head, walked off with it, to the great amusement of the spectators and the disgust of the owner. Many species of dogs manifest the lower kind of imitation in a considerable degree, by the ease with which they acquire a great number of useful or amusing tricks. The mocking-bird *(Mimus Polyglottus)* is another instance of imitative capacity among the inferior animals.

Human beings display what I have called animal imitationality or unintelligent imitation in the powers of mimicry, and the instinctive disposition to copy anything whatever which strikes their attention. When I visited the Yosemite Valley, I saw some Digger Indians fishing for trout in Mirror Lake, and was highly interested in listening to their imitations of the buzz of a bug, by which they called the fish to their bait. They closed the teeth firmly, opened the lips, and blowing through them with interrupted emissions of breath, produced a sound something like z—z—z. These men, who were all wide across the mouth, imitated a bug so perfectly that I was at first deceived into thinking that the place was alive with insects. The Indians on the plains of Colorado are well developed in the region of animal imitation, and they have been known to mimic the howlings of wolves with such unhappy accuracy that travel-

lers have shot into the bushes from which the sounds issued, and killed, not wolves, as they expected, but the luckless Indian mimics. The Chinese have a great deal of animal imitation; and hence, like all persons who are possessed of it, they can readily master any occupation which only demands the close copying of a model, or the undeviating observance of express directions. Those representations of the African character—gesture, voice, and expressions—which we see at negro minstrel exhibitions, are scarcely elevated above animal imitation. The immense popularity which this species of low comedy has obtained in America has been the occasion of much surprise to foreigners; but it is explained by the fact that the negroes, by living in our midst, have so familiarised our people with their peculiarities that every one can appreciate the acting in which those peculiarities are caricatured. The lower classes of the human family are largely characterised by that width of mouth which is the sign of animal imitation. Those persons who have this mark largest are the most devoted to aping the customs of high life and the fashions of the day.

Intelligent imitation involves the higher mental exercises as well as the mere capacity for copying. The man possessed of it will be indeed, to some extent, a copyist, but he will exercise an understanding choice in the selection of his model; and the model, moreover, will be one which cannot be successfully imitated without a much higher degree of intelligence than is ever involved in animal imitation. The physiognomical sign of intelligent imitation is relative width of development in the top of the front head. The parrot certainly possesses some small degree of this higher imitation, for he not only mimics, like the mocking-bird, but is also able to make his mimicry express his wants—as when, by imitation of the human voice, he gives it to be understood that "Polly wants a cracker."

It is by means of intelligent imitation that intellectual and virtuous society develops, in those who are subjected to its influence, a taste for intelligence and virtue. The exercises of this kind of imitation also explain the fact that certain accomplishments, studies, or professions, all requiring intelligence, become at different times the intellectual rage. Thus, it was once the fashion for every educated man to study the classics; whereas the sciences are in our own day the prevailing style. In the seventeenth century French was the language which no one could dispense with; but now the popular taste is directed toward the German tongue and literature. It sometimes happens that a single man of commanding and original genius starts an intellectual fashion, which is copied by all the writers of his country who treat of subjects similar to his own. Thus,

Goethe's poems, which were the first in his language to obtain a wide celebrity, have been so extensively imitated that nine-tenths of the German poetry which has appeared in the last seventy or eighty years has been but the feeble echo of his song. In like manner, the criticisms upon art which he introduced into his romance of Wilhelm Meister, gave the impulse to those "art novels" which have ever since distinguished the literature of Germany. The countless imitations of Byron's poetry is another instance of these intellectual fashions; and so also, though in an inferior degree, is the school of style and moral sentiment which has been lately introduced by our talented countryman, Mr. Bret Harte.

Persons are often possessed of one kind of imitation and devoid the other. Horace Greeley, for instance, was pre-eminent for the almost instinctive ease with which he seized and appropriated the prevailing tone of political or social life. His books, speeches, and editorials are standing monuments of the intellectual drift which the public mind had taken at the period of their production. And yet he was so deficient in animal imitation as to be a notorious non-conformist in dress and manners. His penmanship, also, is said to be so bad as to be illegible, after an interval, even to himself.

Since the public thought is never fully directed in any particular channel, except that channel is germain to the public necessities, it is desirable as well as inevitable that writers and speakers should, to a certain extent, follow as well as guide the popular inclination. They should often take the hint for their studies from those subjects which engage the prevailing interest, and they may, without discredit, and possibly even with advantage, couch their reflections in the prevailing style; but they should never carry their imitation so far as to borrow their ideas, and much less their language, from any master, however admirable. Literary plagiarism scarcely deserves to be ranked with intelligent imitation, for it involves but little more exercise of mind than a monkey would display, who, with a solemn editorial air, would cut, snip, and paste together a collection of articles which he was utterly unable to compose. This species of thievery is, besides, extremely dangerous; for whenever its inevitable discovery takes place, the ambitious plagiarist will find himself in the situation of the luckless ape which aspiringly attempted to shave himself after the manner of his master, but only succeeded in cutting his throat.

No class of people are more entertaining than those who possess both intelligent and animal imitation, for the combination enables them, on occasion, to illustrate and enforce their thought by the powerful and amusing aid of mimicry.

Animalimitationality in mankind often leads to—

Fashionable Follies and Crimes.

"Thou art, O Fashion! power supreme below!
You make us virtue, nature, sense forego;
You sanctify knave, atheist, whore, and fool,
And shield from justice, shame, and ridicule.
The peer, prince, peasant, soldier, squire, divine,
Goddess of Change, bend low before your shrine,
Swearing to follow wheresoe'er you lead,
Though you eat toads, or walk upon your head."

Anonymous.

The student who, thoughtfully pursuing the chronicles of fashion, has familiarised himself with the follies and crimes which have at all times distinguished its empire, can scarcely avoid a certain feeling of contempt for his species; and yet it is not impossible—nay, it is almost certain—that even while he indulges this sentiment, he is illustrating in his own conduct some form of the excesses which he deprecates.

By way of exemplifying the evils of exaggerated and servile animal imitation, I shall, in this chapter, briefly review a few of the fashionable errors of this and of former times. And first, in the matter of costume, we find that innumerable follies have been perpetrated, from the enormous ruffs and high-shouldered epaulettes of the Elizabethan era to the "tilters" and "paniers" of the last few years. In the time of Charles I. it was customary to add at least a fraction of "a cubit to the stature" by wearing shoes with very thick cork soles. These thick soles, which must have been excessively awkward and uncomfortable, have been superseded in our own day by heels which are sometimes almost two inches high, and which have the effect not only of marring the carriage but of injuring the spine, by throwing the body out of its natural poise. In Elizabeth's reign it was the fashion to wear wigs of various dyes, the shade being dictated by a vagrant fancy rather than by any regard to suiting the complexion. The virgin queen herself is said to have had not less than eighty different coloured wigs. In our own day this most unbecoming fashion is extinct; but we have scarcely yet recovered from the disfiguring waterfalls and chignons which, by their enormous proportions, made "the human face divine" appear but a thing of nought. The custom, so inimical to all good taste, of imitating, in the adornments of dress, those natural objects which excite horror or disgust, seems to have prevailed to some extent in all ages. Some of Queen Elizabeth's dresses, which were, of course, imitated by her court, had lions, tigers, lizards, serpents, and all sorts of creeping things, depicted on them. Even now it is not unusual to see ladies, who would

scream at the near presence of a live caterpillar or beetle, adorn their bonnets with the artificial semblance of these unlovely creatures.

The power of fashion has seldom been more unhappily displayed than when it has induced women to violate the modesty which is one of the greatest charms of their sex. In illustration of this point, we do not need to go back to those naked busts which are preserved upon the canvas of Lely, and which sadly testify to the demoralising fashion of his time; nor yet to those indelicate dresses which prevailed after the French Revolution, and which, from their transparent texture, were termed "aerial;" for the "tilters" of a few years since, and the flesh-coloured tights which accompanied them, were almost, if not quite, as objectionable as either of the above modes.

Fashion has been as much at variance with common sense and morality in manners as in dress. The Puritans, with their long-drawn nasal twang, and their preposterous and hypocritical cant, are among the most striking illustrations of objectionable manners. Yet their errors, grave as they were, are light in comparision with the deep and universal licentiousness which obtained in the reign of Charles II. The passion among the English ladies of the eighteenth century for monkeys and parrots, and the rage for expensive collections of fantastic china, have been familiarised to us through the satires which Addison and Steele introduced into the *Spectator*. We learn from the same source that when the *Spectator* was written it was considered bad taste for a husband and wife to be seen in public together—a demoralising pseudo-refinement which is not yet entirely extinct in our fashionable circles. Another custom of that day has been thus caricatured by General Burgoyne in his comedy of "The Heiress":—

Lady Emily.—And another (Duchess) has been detected. I almost blush to name it.

Mrs. Blandish.—Bless us! Where? and how—and how?

Lady Emily.—In nursing her own child!

Miss Alscrip.—Oh! barbarism! For Heaven's sake let us change the subject."

Church going, like everything else, may become a fashion, but when this is the case religion is apt to reach its lowest ebb. We read in "The Tattler" a letter, in which the correspondent satirises the levity of church-goers in the following description: —"Lady Autumn made me a very low curtsey the other day from the next pew, and, with the most courtly air imaginable, called herself a 'miserable sinner.' Her niece, soon after, in saying 'forgive us our trespasses,' curtseyed with a gloating look at my brother. He returned it, opening his snuff box, and

repeating a yet more solemn expression." It cannot be sufficiently regretted that the church, which claims to be the moral instructor of mankind, should have so far yielded to the baleful influence of fashion as to have lost much of its utility. The introduction of operatic music, church festivals, or fashionable and sanctimonious gambling, together with the pernicious pew-rental system, are gradually transforming the temples of God into Sunday theatres, where those who have duly paid for their seats, and tricked themselves out like a show-figure in a dry-goods store, can repair, and seesawing into a pew spring up and down, in taking a seat, like a rubber ball, or a fish pole, when bobbing for eels. Truly we see every day the illustration of De Foe's celebrated quatrain—

> "Wherever God erects a house of prayer,
> The devil always builds a chapel there;
> And 'twill be found, upon examination,
> The latter has the larger congregation."

The prayers and sermons which are heard in the fashionable Sunday resorts of fashionable and listless people are often so vague and general, and so inappropriate to the special needs of the congregation, that they are entirely without convicting power. Of course man is fundamentally the same in all ages, yet different social conditions develop in him somewhat different tendencies, and address to him different temptations. Of this important fact the church takes too little account, as we see in the multitude of sermons in which men and women are exhorted to avoid those errors of belief and of action, to which in this age there are but few temptations. Addresses like these, which do not come warm from the heart of the preacher, are ineffectual to reach the hearts of the people. The crying sins of our time are dishonesty in public and private life, fœticide, drunkenness, licentiousness, vanity, and extravagance; and it were well for the church and the world if we heard more about these offences against the Divine law and the law of nature, even though less time were devoted to the wicked Jews and Canaanites, and the heathen of China and Africa. The churches of America are tottering over their rottenness, and unless they speedily reform *they must fall.*

Flirtation is almost universally regarded as an indispensable amusement for young ladies. Comparatively devoid as they are of other resources, it has for them that charm of artificial excitement which young men find in the intoxicating cup, or in the heated pursuit of wealth and honour. Rather than resign this feverish pleasure, many a girl has checked the first fresh impulses of her heart, and, refusing eligible offers of marriage, ended her life a disappointed and aimless old maid. This

fashion, which is considered so innocent, of playing fast and loose with the God-given instincts, which should result in a life-long union, is corrupting to the heart, fatal to the noblest charm of the manners, and undermining to the moral character. The professional flirt consumes the flower of her life in the exercises of vanity, jealousy, and belittling ambition; her modesty is necessarily corrupted by the personal familiarities which she courts and receives from the opposite sex, and even her virtue is often sacrificed. Many a girl who has been stimulated to flirtation by fashion rather than inclination, has taken the first step on the sliding scale of animal passion, only to end her unhappy course by seeking the professional services of an abortionist. The procurement of abortions has, indeed, become so common, that certain houses in our large cities are devoted to this form of murder; and physicians who make it their exclusive business are loudly heralded as the benefactors of the female sex. And yet this unnatural practice often ends in the death of two, instead of one, as intended; it is, moreover, in the direct interest of immorality, by flattering women into the belief that they may yield to temptation, and yet escape its social consequences.

Fœticide is unhappily not confined to unmarried women, for criminal, revolting, and dangerous though it be, it is constantly practised by those who have voluntarily assumed all the consequences of married life. For the sake of lucre many physicians will run the risk of going to the penitentiary for violating the law against abortion; and for the sake of avoiding the healthful duties of maternity, many married women will injure their health, and even endanger their lives. It is as natural for wives to bear children as for apple trees to produce apples; and those women who thwart the designs of God in this respect, are punished in the flesh and the spirit. *Lucorrhea, prolapsus uteri, ennui,* menstrual derangements, and abbreviation of life, are among the results of artificial abortion, and prevention of conception. The coarctation of nature has transformed many a home into a gloomy and silent hospital, which would otherwise have resounded with the happy voices of children, and been brightened by the active care of a cheerful and healthy mother.

When I was in California, I heard of the wife of a minister who boasted that she had committed fœticide thirteen times. Our churches are filled with women who are guilty of this sin, and yet the fear of indelicacy or the want of *positive* information restrains our ministers from administering to their female parishoners that private warning or rebuke which they are unable or dare not to give in public to a promiscuous audience of males and females, old and young. It seems as if men like Beecher, Chapin, Young, Hall, Spurgeon, Binney, and Gilfillan, might

devise some means by which this crying enormity could be reached If those bell-wethers of the church would but rattle their bells against this evil, and not a few others that demand their attention, the ecclesiastical commoners would follow their example, and we might hope for a radical reform.

Every custom which is opposed to nature is opposed to morals, and is a legitimate subject of reprobation from the professed teacher of morality. Fashionable suppers of almost indigestible food, late hours, secret sins among the unmarried, and sensual excesses among the married, deforming the body by tight lacing and tight boots, and injuring the health by painting and powdering the face and dyeing the hair—all these are strictly immoral practices, which should be often the theme of the preacher's public or private exhortations and prayers. In point of fact, however, they are rarely, if at all, on his tongue; and it is for this reason that the church has lost so much of her old reputation and influence as a moral guide. When the neglect of these subjects is complained of, the clergy are accustomed to reply—that if the religious *principles* which they inculcate are adopted in all their integrity, they will bring forth every form of *practical* morality which is compatible with the ineradicable peculiarities of the individual character. This is doubtless true if the principles are really adopted, but the popular mind is found incapable of fully conceiving and applying abstract principles. Hence, unless they are explicated and impressed by concrete practical illustrations, they have no more influence upon the character than the sound of a tinkling cymbal, which pierces the ear but fails to reach the heart.

In matters of fashion, Pope lays down the rule—

> "Be not the first by whom the new is tried,
> Nor yet the last to lay the old aside."

In most of its applications this advice is excellent; yet some fashions are so excessively disfiguring and unhealthful, that the time for trying them should never come. Pre-eminent among these is the present mode of girding in the female figure until health as well as beauty is irreparably destroyed. In allusion to this abuse of nature, Professor Huxley said in a recent lecture—"The present fashions outrage all common sense by displaying a woman's figure in the form of a candle-extinguisher upside down; such an absurd style of dress is physically injurious and anatomically monstrous." The public eye has been so long accustomed to the wasp waist of our fine ladies that a natural figure is now considered quite ungenteel; yet every physician at least knows well that this fashionable shape means a lean and yellow body, an unnatural protrusion of the

hips and lower abdomen, a weak back, an inactive liver, a dyspeptic stomach, and a total derangement of all the organs of maternity. By weakening the generative organs it prevents or enfeebles offspring, and greatly increases the liability to death in childbirth. Another effect of tight lacing is an abnormal venereal appetite, produced by the restraint which the corsets impose on the return of the venous blood to the heart and lungs. Many a girl has lost her virtue in consequence of the undue excitement of sexual desire by the congestion of the impure venous blood around the organs of generation. We are told that we should worship God with all our strength, but the woman who has all her strength turned to lascivious thoughts, by being jammed down and tied up with corset strings, has none of that lofty spiritual passion with which alone the Creator can be adored.

Tight shoes, in common with tight lacing, produce irritability of temper, by painfully exciting the sympathetic nervous system. Florence Nightingale, it is said, plants her foot on a piece of leather that the cobbler may mark around it, and make the sole of her boot according to the figure thus delineated. This is the only proper way for a foot to be measured. The force of fashion is in nothing more apparent than in the eagerness with which the women of civilised countries distort their feet and waists, and puncture their ears, even though they are perfectly alive to the barbarism of similar deformities when practised by other races. While they are ready to stigmatise the compressed figures of the Chinese, the flat heads of certain American Indians, and the nose-rings of many African tribes as hideous and barbaric, they do not seem to reflect for a moment that "wherein they judge another they condemn themselves." Those wishing further illustrations of the power of fashion to deform and disfigure the human organisation, are referred to a chapter on "Fashion" in my work entitled "Nature's Revelations of Character."

It has doubtless been observed that most of the fashionable follies and crimes to which I have alluded have been the errors of the gentler sex. The inferior education of women, and their lack of worthy objects of ambition, have always made them peculiarly liable to the excesses of animal imitation. But although men have had the advantage of women in being developed by superior stimulations, and although this advantage has resulted in their comparative freedom from fashionable excesses, they are yet far from displaying that independence of thought and action which should be the special crown of their manhood. The use of tobacco, for instance, in its various forms, is far more a fashion with men than a natural craving. The

quid, the cigar, or the pipe, are so generally used by adult males that boys are prompted by ambition rather than appetite to acquire what they consider the manly accomplishments of chewing and smoking. For the sake of following the fashion they brave the nausea and headache, which are the earlier attendants of tobacco using, and hazard the dyspepsia, heart disease, nervousness, and paralysis, which are its ultimate effects. The use of tobacco among men debilitates the nervous system, and, like the deforming of the female waist, prevents healthy offspring. It is alleged, in defence of this disgusting and pernicious practice, that the nicotine contained in tobacco (though well known in medicine to be eminently injurious) is required by the human system. This argument strikingly illustrates the apothegm that "none want reasons to confirm their will." If nicotine is really so advantageous to the system, how does it happen that the lovers of tobacco do not recommend it to women, who, by reason of their physical delicacy, have almost a peculiar claim upon every source of health and comfort? The mere fact that a woman who chewed or smoked would be ostracised by the very parties who make this sanitary plea, is a proof of their insincerity. If I were the slave of tobacco, I think I would acknowlenge the fact with all the manliness which remained to me, instead of scouring the wide range of sophistry to find a false justification.

The extravagance that young men display in their expenses is, to a great extent, the result of animal imitation; and so, also, is their social preference for worthless but showy young ladies. Many a young man, who is attracted to a quiet and industrious girl, is actually afraid to pay her attention or to marry her because she is not the fashion with his "set." Alluding to this subject, Elizabeth Waking says, in her articles on "The Woman Question"—"It is really very funny, though somewhat discouraging to a clever and modest girl, who stays at home and stitches, and bakes, and studies her book, to go to an occasional party and find herself fatally gravitating toward the wall or the photograph album, while other young ladies, who never did a hand's turn to so much as make their own clothes—though their clothes do so much to make them—are fairly smothered with attentions." Nothing but the overwhelming influence of fashion could so blind young men to their own best interests as to induce them to marry a bundle of false hair and expensive clothing, rather than a sympathetic and sensible helpmate. Truly, as a French author has said, fashion is the tyrant of taste, and the destroying power of private happiness and of public manners.

The licentious habits to which the native passions furnish so

strong a temptation are often further stimulated by the power of fashion. In illustration of this point, I might cite the corrupt courts of many of the Roman Emperors, and the demoralising influence which Louis XIV. and Charles II. exerted upon the manners of their times; but unhappily our own large cities, and many even of our smaller ones, furnish us an example nearer home. In many circles of society a young man who refuses to visit houses of ill-fame is considered by his male associates a mere Miss Nancy, fit only for the society of old maids and clergymen. When fashion thus encourages the impulses of animal passion, instead of restraining them, when the fear of contempt is added to the love of pleasure, it is as much to be expected as it is to be deplored that young men should form those vicious habits which destroy the manhood and debase the soul. The power of fashion is equally displayed in the indulgence with which the licentiousness of married and unmarried men is regarded, and in the severity, nay, the positive inhumanity which is visited upon their female victims. The libertine presents himself a courted favourite in the most polished company, while the prostitute is coldly consigned to everlasting infamy.

The form of intemperance of which I have just spoken leads me to the consideration of another, which is desolating many a happy home and filling many a grave. The customary and excessive use of intoxicating drinks is one of the most ruinous and demoralising habits which any man can form; and yet, although religion is the appointed guardian of morals, I have never heard a sermon upon drunkenness—not one even—in which it was incidentally treated for five consecutive minutes. But it is not only true that our churches have neglected to censure this evil, our social influence has actually been cast in its favour. In many cases young men who have acquired such a taste for liquor that they notoriously scandalise every principle of hospitality by carrying their whisky-flasks to private parties, concealing them in the dressing-room or beneath the porches of their host; who give select dances to young ladies, and retire at certain intervals from their company to enjoy a quiet "smile" at the bar of the hotel; who cannot spend an evening in female society without preparing themselves by "a whisky" which is hypocritically smothered with a whisky-killer—in many places, young men, known to be guilty of this abominable conduct, continue in the undisturbed enjoyment of every social advantage, from the courtesies of the parents to the flattering smiles of the girls.

Now I am not going to take any unconscionably fine moral standpoint. I will admit that a great many men drink whisky

for health, and wine for pleasure, and are not appreciably depraved; but I will stand on this principle forever—that the manliest courage lies in the fear of evil, and that *that* is unmistakeable evil which has led to the results I have described. It is an evil which undermines self-respect and honour, politeness and truth; which benumbs the conscience, dulls the mind, and vulgarises the taste.

I need hardly say that temperance, in its worthiest sense, is more than mere abstinence from intoxicating drinks, from extravagance, or licentiousness; it is that habitual moderation in the use of all things which leads to good health, indicates good sense, and insures a good reputation. It is an unequalled conservator of power. They who possess it, and they only, are enabled to fulfil their high duty by making the most of themselves. With these rare and self-commanded souls every energy *tells*, and every grace wears its noblest adornment. When they have fixed their eyes on their object, they pursue it without jerks, recessions, or swervings; and when, at last, they have grasped it, they do not crush it by too tight a clench, nor loose it by careless holding. They are men who, in all their aimings, strike the white; and who, in the warm splendour of their sunset-life, behold themselves venerated by their generation, and blessed by their children's children.

> "So peaceful shall they end their blissful days,
> And steal themselves from life by slow decays."

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LINGUISTIVENESS

AND

LITERATIVENESS, OR, SPOKEN & WRITTEN LANGUAGE,

MONOEROTICITY, OR MATING LOVE,

AND ELEVATIVENESS, OR ASPIRATION.

A Lecture

By J. SIMMS, M.D. OF NEW YORK.

"He was a scholar, and a ripe and good one;
Exceeding wise, fair-spoken and persuading."—SHAKESPEARE.

LANGUAGE, in its most general sense, is the expression of thought. Thus we have the language of the deaf and dumb, the language of the eye and the gesture, and the language of the inferior animals. The poet Donne attributed language to the blush in the striking description—

"Her pure and eloquent blood
Spoke in her cheeks, and so distinctly wrought
That one might almost say her body thought."

Even silence, under exceptional circumstances, may become *expressive*, and, to that extent, fulfil the functions of language.

It is admitted that the inferior animals possess certain modes of communicating with individuals of their own species, though we have no certain evidence that they can make themselves understood by creatures of a different zoological group. The cock gallantly calls the hens of the barn-yard to share the morsels of food he has found, and they respond to the invitation. Cattle have a language which they so well understand, that if one of them has smelt of blood, he can throw a whole herd into frenzy by his angry bellowings. The barking and howling of

wolves and dogs are answered by their distant mates as intelligently as one human being responds to the hallooing of another. The sparrow chatters to its young, or to the companion of its nest with the gossipy tongue of a housewife. The wild goose sets an entire flock in motion by a signal note; and the parrot has not only its vernacular language by which it communicates with its own species, but also the capacity to learn the language of human beings, and thus to express its needs, its loves, and its animosities in one or more foreign tongues. The language of animals has suggested many of our onomatopoetic words—as *hiss*, which resembles the voice of the goose; and *buzz*, which is like the song of the bee.

Human language is divided into that which is spoken and written—the former being the expression of ideas by means of significant articulate sounds. The articulation of sounds is the utterance of syllables and words by closing or jointing certain of the organs of speech while vocal sounds are being emitted. It is this articulation which peculiarly distinguishes the voice of human beings from that of the brutes. The lower animals open the mouth and utter vocal sounds, but, with a very few exceptions, are destitute of the articulating power.

The organs necessary to the vocalisation and articulation of sounds, *i.e.*, to human speech, are the lips [*labii superioris* and *labii inferioris*], the tongue, the ligaments and muscles of the glottis, the palate, teeth, mouth, lungs, and chest. To these organs we must look for the physiognomical signs of spoken language, since it is through them only that speech is possible. The phrenologists, in looking to the eye, which is never used in speaking, for the sign of language, are as preposterous as though they were to gaze at the upper windows of a house, which are never used for egress, with the expectation of seeing an individual emerge from them. A pseudo-scientist, who claims to be the head and front of phrenology in America, and who judges of language by the eye, marked Daniel Webster four, and Henry Clay five in this faculty, on the seven digit scale. This person, who has also marked school boys, that never afterwards showed any peculiar disposition to speak, six and seven on the same scale, is a striking instance of the absurdities into which an examiner will be betrayed by an erroneous sign.

The marks of language which I have given above, indicate only the physical ease with which words can be articulated; but it is an established principle that action follows the line of least resistance, and hence, those persons who are so organised as to speak with facility will be those, other things being equal, who have contracted the habit of speaking. It must however be borne in mind that the habit of speaking has nothing what-

ever to do with the quality of the thing spoken—the latter depends of course on the character, the intellect, and the education.

The lungs are one of the most important instruments of speech, for the breath is necessary to produce tone; and to inhale much air, or breath, requires large and vigorous lungs. Public speaking demands a constant and protracted effort, which would soon exhaust any man who was unable to take deep inspirations. The size of the nose, and particularly the dilation of the nostrils, is a certain evidence of the size and vigour of the lungs. Cicero, Hon. William Pitt, Sir Robert Peel, Lord Brougham, Henry Clay, and, indeed, all great orators have possessed large noses. The shape and size of the nose indicates the concavity of the roof of the mouth as well as lung capacity. When the nose and the bones which support it, rise high above the plane of the face they produce an elevated arch in the roof of the mouth, by means of which the tongue is enabled to move with that perfect freedom which is essential to distinct articulation. The ourang-outang's inability to speak does not arise altogether from the defect of his lungs or larynx, nor yet from his want of sense—for in this respect he is certainly not inferior to the parrot—but is partly due to the comparative flatness of the roof of his mouth.

The important aid which the tongue renders to articulation is evidenced by the fact that without it not a word could be uttered. The teeth are essential to the distinct pronunciation of the dental, and the palate to the palatal letters; but the lips are the great controllers of spoken language. By governing the passage of the air through the mouth, they act upon the expiration somewhat as a brake does upon the movement of a wheel. Among the lower animals they exercise very little independent action, seeming to serve merely as a covering for the jaws, whose movements they follow without change of expression. In human physiognomy their length, prominence, and flexibility, together with the straightness of the horizontal cleft between them, is the most satisfactory sign of the capacity for speaking. Although I have examined many deaf and dumb persons, I have never yet seen one of this class with large and pouting lips. John B. Gough is universally acknowledged to be one of the most correct and rapid speakers of our time; and his mouth, in every particular, confirms the sign I have given. So also do the mouths of Henry Clay and Henry Ward Beecher, whose wide and prominent lips come together in a straight horizontal line. Daniel Webster's eyes were sunken where the phrenologists place the sign of language, but his lips were large and protruding, as though some mighty thought were pushing its way out eager to

be heard. Negroes are alike distinguished by their loquacity and the thickness of their lips; and, to descend still lower in the scale of life, the frog, with its wide and prominent mouth, is a natural and incessant talker. It may be said that the parrot, notwithstanding that it is destitute of lips, is peculiarly gifted in the power of speaking—but this bird has a protruding bill, which answers the purpose of pouting lips; and also an elevated arch in the roof of its mouth, which resembles the upper concavity in the mouth of man. If the bill of the parrot were as mobile as are human lips, its power of speaking would doubtless be greatly increased. The giraffe, eland, and kangaroo, which have small and closely-shutting lips, are perfectly silent even when being killed. People with thin lips are apt to fall into the habit of using *langage des halles*, but those whose lips are full are fond of *literæ humaniores*.

I have stated that the lips are the principal sign of spoken language; yet no physiognomist should venture a decision upon the evidence which they alone afford. The other organs of speech are all important; and as the condition of many of them cannot be judged by the eye, the person examined should always be caused to speak before the physiognomist pronounces judgment.

The power, roundness, flexibility, and sweetness of the voice may be greatly improved by judicious elocutionary training. One of the most effectual means of expanding the chest is to take a long and deep inspiration, and then, while the lungs are filled with air, to beat the chest quickly until it is necessary to breathe again. This exercise, by keeping the lungs for some time at an exaggerated expansion, has precisely the same effect upon their elastic substance that a continued strain has on a rubber band. The band, after being stretched for an instant, and the lungs, after an ordinary inspiration, return to their original size; but if, in either case, the tension is maintained for any length of time, both will be in some slight degree permanently extended. The tone and inflexion with which a sentiment is uttered has as much to do with the effect which it makes on the auditor as the colour and expression of the countenance have to do with the effect of the features. And yet the importance of vocal culture is so little appreciated among our people that a pure tone and distinct articulation are very exceptional either at the bar, in the pulpit, or on the rostrum.

There are no better rules in elocution than those which Hamlet gave to the players—"Speak the speech, I pray you, as I pronounced it to you, trippingly on the tongue; but if you mouth it, as many of our players do, I had as lief the town-crier spoke my lines. Nor do not saw the air too much with your

hand thus, but use all gently. . . . Be not too tame neither, but let your own discretion be your tutor."

Nothing can more strikingly illustrate the effect of constantly practising certain classes of sounds or articulation than the difficulty which is experienced by adults in the pronunciation of a foreign tongue. Every language has sounds more or less peculiar to itself; and the habit of contracting or expanding the muscles, in order to utter them, produces a permanent modification of the vocal organs.

The representation of articulate sounds by letters or characters in such a manner as to convey thought, constitutes a written language. The spoken and written languages of the Chinese are said to be entirely different. It sometimes happens that a language which has ceased to be either spoken or written to any extent finds a living tomb in books of transcendant value, and thus enjoys a sort of posthumous life. This is the case with the Greek, Latin, Hebrew, and Sanscrit tongues. The latter excels all others in the number and complication of its metres.

Philology was understood by the ancients to include the sciences, literature, and philosophy; but in the modern acceptation of the term it means a methodical comparison of the words, the internal structure and grammatical forms of the various languages of the earth, with a view to the explication of national character, origin, and history. In this sense it is of comparatively recent date, for it was not until the middle of the eighteenth century that the learned began to take a really astute and comprehensive view of the different languages spoken by our race.

Philologists have never agreed as to the number of the languages, owing to the fact that they have had no common criterion by which to distinguish them from dialects and idioms. According to the estimate of Adelung and Vater, there are 3064 languages and dialects. Balbi, an equally learned authority, reckons, by another standard, that there are 2000 languages, 860 of which have about 500 dialects.

Many conjectures have been hazarded upon the still open question as to what was the primitive mother tongue. Most of the savans have supposed it to be the Hebrew, but Van Gorp, a philologist of Flanders, was so far betrayed by his patriotism as to decide the controversy in favour of the low Dutch!

To the revival of classical literature in the fifteenth century, we are greatly indebted for the intellectual re-awakening of Europe. At that time a zeal for those immortal works which have been handed down by the genius of antiquity, animated every institution of learning; imitations of the ancients became popular, and the barbarous Latin of the monks was corrected by

a return to the pure fountains of classic lore. The minds of the people being thus aroused, soon found new channels of activity. The modern sciences were originated and developed, and the question of the comparative value of the ancient and the more recent learning began to agitate the schools. In our own day the leaning to the sciences, or, as it is called, practical education, has been very marked. In Prussia and in the United States this practical education is now the chief end of the public school system, and even in the highest universities of these countries and of England, the decline of interest in classic literature is plainly manifested.

All languages, while they admit of great modifications and additions to their vocabularies, exhibit a wonderful conservatism in their organisation or internal structure. Thus, the Chinese and its cognate dialects, is monosyllabic; that is, every syllable of which it is composed has an independent significance. On the other hand, the Sanscrit of the East Indies is polysyllabic; or characterised by words of extraordinary length, whose component parts have, by themselves, no meaning whatever. Yet these two languages, though spoken by contiguous nations, have maintained their distinctive characteristics intact for thousands of years.

Written language is a much slower mode of conveying thought than oral communication, but like most things of slow attainment, it endures the longer. *Litera scripta manet.* But while it takes a comparatively long time for an author to reduce his thoughts to writing, the reader's eye can scan a printed page and comprehend the ideas expressed on it in a much shorter period than the words it contains could be articulated. Hence, while written language is the slowest mode of *expressing*, it may be the quickest way of *receiving* information.

Such is the limitation of human powers that the same person is rarely distinguished in both spoken and written language. The forms of speech into which ideas are cast in oral and written communications are so different, that the study which is required to master the one mode of expression usually occupies the time and attention to the exclusion of the other. Horace Greeley was notoriously a poor speaker, although the point, simplicity, and vigour of style which he has displayed in his laborious editorial career, have made him the first journalist in America. Dr. Redfield is an able and elegant writer, but a common-place speaker. Milton, Sternes, Samuel Butler, and Locke, were all remarkable for their writings, but undistinguished as orators or conversationalists. Nevertheless, it sometimes happens that the capacities for writing and speaking are united in the same individual, as in the cases of S. T. Coleridge, "the old man

eloquent," and Samuel Parr, who was equally eminent in conversation and letters.

A person possessed of the literary gift will have a face which is large at the upper part and tapering toward the neck. John Ruskin, whose eloquent and fertile pen has secured him a prominent place among living writers, has this shape of face; so also had Edgar A. Poe, a man who was, in some respects, the most original poetic genius that America has produced.

Fine writing, as well as fine talking, requires fine thinking. "The style," said Buffon, "is the man;" that is, the manner in which one talks or writes is the reflex of the whole nature. A man of clear and vigorous mind will write with clearness and vigour; while those who are mentally superficial, confused or fanciful, will be shallow, obscure, and hyper-imaginative in their literary work. I once knew a lady remarkable for the point, eloquence, and fluency of her conversation, who, when asked how she acquired her complete mastery of the language of passion, replied, "in the long nights when I have lain awake the prey of contending emotions."

Thought is not the only requisite of fine talking and writing, since no one can master either without assiduous practice. Dr. Johnson ascribed his remarkable conversational powers to his life-long habit of expressing any thing which he had to say in the very best language he could command. We all know how soon a careless indulgence in vulgarisms of speech impairs our power to use chaste, correct, and expressive language. Some very distinguished authors have been unknown to fame until late in life, and after they have practised writing for a long time. This was the case with Samuel Richardson, who, although a voluminous letter-writer, did not publish the first of his celebrated novels until he was fifty years old. In general it may be said that practice in writing is less needed to enable an author to write well, than to enable him to write well with rapidity.

Talleyrand and Baron Von Humboldt were of the demoralising opinion that language was the medium employed by men in deceiving their fellows. It is certainly too often used for that purpose, yet the trust which is generally reposed in human testimony is a proof of its general trustworthiness. Except for this trust, indeed, it would be impossible to carry on the affairs of life.

If our race were deprived of the power of speech, it would speedily degenerate into barbarism; for without this means of communicating thought, the accumulation of knowledge would be almost exclusively confined to the narrow range of personal experience, and civilisation would be impossible.

We shall here enter upon the consideration of

Monoeroticity or Mating Love,

which faculty, as well as language, rests on the Muscular Form.

"All thoughts, all passions, all delights,
Whatever stirs this mortal frame,
All are but ministers of love,
And feed his sacred flame."—*Coleridge.*

Love may be defined as that attractive power which leads not only to the most intimate associations of which sentient and intellectual beings are capable, but also underlies the phenomena of chemical affinity, gravitation, and cohesion. In this lecture I shall merely consider that species of love which results in the mating of men and women, and which, when properly regulated, is the foundation of the family, the safeguard of the state, and the bulwark of civilisation.

But while this passion is capable of producing such beneficent effects, it is also the parent of jealousy and violence, of calumny and revenge, so that one may, parodying the words of Shakespeare, say of it what Cassio said of wine; "O thou invisible Spirit of Love! if thou hast no other name to be known by, let us call thee devil;" for there is nothing that is like love, so sweet, and so bitter. To-day, he draws down the heavens, so that even while the feet of his children tread the earth, they walk among the stars; and to-morrow, descending to Phlegethon, he brings up of its molten hell to pour into their hearts.

"Oh! sovereign power of love! oh grief! oh balm!
All records, saving thine, come cool and calm,
And shadowy through the mist of passed years;
For others, good or bad, hatred and tears
Have become indolent; but touching thine,
One sigh doth echo, one poor sob doth pine."

Who, then, is so bold that he would kindle a fire, which may warm only to consume him; or plant in his heart a flower whose rain is tears, and whose perfume is distilled in an atmosphere of sighs. Ah! it is in vain that cold philosophy, or bitter experience, oppose the deep promptings of nature; still we would hear love's enticing song, deliciously sweet, and breathing languidly his perfumed atmosphere, and softly rocked in his embracing arms, intoxicated, we would fall asleep and care not for the waking.

The voice of love is low and gentle, and his speech is the extravagant language of passion; yet they who can use this language with the greatest facility and ardour, are often those worldly and sophisticated men and women, who have learned in a long career of dissipated affection everything which the heart can feel, and also its limit and the incipience of insensibility. Otway, in his pathetic tragedy of "The Orphan," has embodied this truth

in the advice of Chamont to his sister—"If," advises the brother, "a man says he loves thee, with caution trust him; but if he swears, he's certain to deceive thee."

The drama has ever been the depository of love's archives, so that, though we should read nothing but plays, we might yet leave unturned no page of his history. With what varied description, yet with what unchanging fidelity, do we see him there depicted in the romantic sentimentality of Lydia Languish; the weak and ungoverned fondness of Calista; the frenzied passion of Queen Zara; the mournful consistency of the widow of Hector; and in the sweet and wifely affection of such heroines as the Mourning Bride and Belvedera. Shakespeare, who has painted every other passion with such inimitable skill, has not been less happy, when love sat for his portraiture, as those contrasted pictures, in which appear the frank and simple affection of the tender-hearted Juliet, and the crafty reserve of the fickle Cressia convincingly attest.

It is estimated that, of the human species, twenty-one males are born for every twenty females; and it has been very reasonably supposed that this slight inequality among children is designed to secure an ultimate parity among adults, by making provision against the greater loss by accidents, &c., to which men are exposed from the nature of their occupations. However this may be, it is certain that in every normal condition of society men and women are found distributed in equal numbers —a fact which has usually been considered the strongest argument in favour of the monogamic institution. A like equality of the sexes exists, however, among the lower animals, most of which are, by the law of their nature, promiscuous in their intercourse with each other. We must, therefore, look elsewhere for a satisfactory authorisation of monogamy. In a state of nature men and women rarely choose and remain faithful to a single mate, but in the higher stages of civilisation monogamy becomes a legal requisition, an established practice, and a recognised duty. So long as human beings are under the absolute control of those animal passions which are so far from forbidding, that they actually prompt them to indiscriminate associations, polygamy, or what is still worse, free-love, will obtain; but the reverse will be the case when their higher nature, and especially their moral sentiments, have been adequately developed by the refined influences of civilisation and education. It is found to be an invariable fact, that promiscuous love impairs the finer feelings, while mating love develops them. It is also true that the family is the potential unit of civilised society, and that the highest type of family life is strictly dependent upon mating love; finally, it is observed that social demoralisation always

occurs if, from a disturbance of the numerical parity of the sexes, any considerable number of men or women are deprived of the natural opportunity to secure life-companions. These, and cognate considerations, founded, not on the equality of the sexes, nor yet on man's physical condition, but on the requirements of his moral and intellectual nature, furnish a convincing proof of the beauty and the duty of mating love, and by consequence of monogamic institutions.

A striking illustration of the excesses into which new ideas are apt to run, is afforded by our women's rights women, who had no sooner obtained a repeal of nearly every marriage law which could be supposed to be oppressive to their sex, than they savagely attacked the marital institution itself, sacredly linked though it be with everything that is purest and fondest in human life. History is replete with illustrations of these reformatory excesses following the excesses of wrong-doing, and it is an explanation, though certainly not a justification of the former, that they are always violent just in proportion to the enormity of the evils which they assail. Thus, in political history, the period of the *taille*, the *corvie*, the *lettre-de-câchet*, the administrative tribunal, and the *garantie des functionaires*, was succeeded, not by liberty, but by the horrors of the French revolution. In the annals of the Church, the revival of the neglected doctrine that salvation is by faith, speedily culminated, not in penitence, but in the immoralities of Antinomianism; and in Science, the final triumph, after twenty years gainsaying, of Harvey's theory of the blood, was followed by a school of medicine which attributed to disorders of the circulation every disease that flesh is heir to. In their re-actionary movements against the legalised abuses of marriage, the women's rights women have guiltily advanced free-love doctrines, which are an anachronism in a christianised civilisation, and which, *as* an anachronism, must speedily perish. But when their errors have been swept away by the moral sentiment of steadier and more penetrating minds, the *needed* reforms which they assisted, and the *just* ideas which they instilled into the nations will bless and ennoble coming generations. In the ornate language of Elizabeth Waking, "Nothing is at once more pitiable and more ridiculous, than to see these misguided reformers, intent on blowing ineffectual bubbles to catch the rainbow on their narrow and dissolving span; but all the while their bubbles are breaking, the eternal sky is growing radiant with the bow of promise and of hope."

The physiogmonical sign of mating love is a roundness, not of the eyeball, but of the commissure, or opening of the eyelids. When this propensity is largely developed, the upper and lower

lids, if fully opened, will very nearly describe a perfect circle. This formation of the visual commissure is particularly noticeable in birds, most of which gratify their love-nature by mated association. In the turtle-dove *(turtur auritus)*, the eyelid-opening is peculiarly round, and in correspondence therewith, its mating faculty is so strong, that when one of a pair dies, the lone bird seeks no other mate upon which to bestow its exclusive affection. The love-bird *(genus psyttacus)*, has an eye-commissure as round as a bullet, and it always singles out its mate, and remains as faithful to it in its native state as though it were limited to a single partner in the narrow confines of a cage. The goose *(genus anser)*, chooses its mate in February, and clings to it during the following season.

Mrs. S. Margaret Fuller Ossoli was an excellent example of mating love. Notice the roundness of her eyes.

Marchioness S. M. F. Ossoli.

Brigham Young.

Her love came from a high-toned, pure, and faithful nature, and assumed, in consequence, a connubial form. Mrs. Lucretia Mott's eyes are nearly as round as a full moon, and none can look upon her face without feeling that the purity of an angel gleams forth from the portals of her soul. The round eye indicates an inclination for kissing in men, cooing in doves, and playful fondling in cats.

The eye commissure of those who are deficient in mating love is long from side to side, and narrow vertically. This appearance characterises the lower types of individuals and races; but as a people advance in spiritual and intellectual life, round eyes become more abundant. They are doubtless more numer-

ous now than in the time of King Solomon. The eyes of this licentious monarch must have been like those of the hog *(genus sus)*, as he distributed his love promiscuously among his seven hundred wives and three hundred concubines. We know that Brigham Young has a long, narrow, and porcine eye, and his polygamic theory and practice have given him a world-wide notoriety. Goats, horses, cattle, and wolves have not round eyes, and in accordance with this sign, we find that they do not mate but herd indiscriminately.

Those who possess mating love are tender, devoted, and faithful; their highest desire being the succour and happiness of their nuptial partners. Their love has its birth in the mind, and like all the fruits of the judgment, is quiet and enduring; but the love which is born of the body, like most of the intenser passions, burns far too fiercely to burn long. It is like a candle with too large a wick, or like a snowy wreath in May, which descending in a night, vanishes with the sun's appearing. It is coarse and selfish—a butterfly, it roams from flower to flower, sipping the sweetness of each, but deserting the most lovely when its fickle appetite is sated. As horses, to endure well, must not be driven furiously, so love, to be long preserved, must be exercised with moderation. And yet while animal passion is but poor soil in which to plant the nuptial tree, it often abounds in courage as well as ardour—running fearful risks in order to secure the object of its desire. Many a lover would climb a maiden's window to woo her, though he well knew that her irate parent would shoot him on discovery. Yet the youths who dash into this kind of adventure are almost certain to wreck the happiness of any woman who would dare to wed them. Three weeks after the bridal day their wives have usually reason to regret either that they had *not* been shot, or that they had never been born.

The happiest marriages are those which take place between persons who both possess large mating love, and who are, in addition, peculiarly adapted to each other by character, physique, and education. No sadder mistake can be made, than for one with large mating love, to marry another unhappily distinguished by salacious tendencies; for as water flows to its level, so love seeks its own quality. It is an invariable rule, that animal passion cannot find full satisfaction in spiritual affection, while mental love, on the other hand, is disgusted by excessive animality, and shrinks away from it to a mother's or a sister's tenderness.

A thoughtful application of the truths of physiognomy enables us to discriminate the signs of love with unerring sagacity. The round eye, as already said, is evidential of a high type of mating

love, while long and imperfectly opened commissures are warning lights of fickleness and animality. Erasmus, with all his brilliant scholarship, and Henry VIII., though monarch of Great Britain, never carried their love higher than their lusts, and their piggish eyes clearly foretold their love-life. The time is coming when lovers, instead of gazing unintelligently into each others eyes as they would stare into vacancy, will decide by a glance whether spiritual or animal love predominates in the characters which interest their hearts.

In conclusion, let me urge, that the only happiness which never disappoints or satiates is the happiness of the heart, and that to enjoy this bliss in its completeness, the bud of mating love must unfold into the perfect flower of a fond and lasting union. The Catholic and Greek Churches have scarcely exaggerated the uses of sanctified marriage as a means of grace when they placed it among the seven sacraments of their religion.

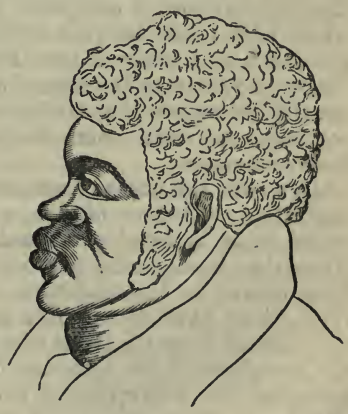
"To make a happy fireside clime for weans, and wife,
Is the true pathos, and sublime of human life."

During the remaining portion of this lecture, allow me to direct your attention to the faculty of

ELEVATIVENESS OR ASPIRATION.

"Past the high clouds floating round, where the eagle is not found;
Past the million starry choir I aspire."—*Barry Cornwall.*

Rev. J. G. Lavater, a poet and physiognomist. Lavater wrote of himself, that he possessed an inordinate desire to climb every mountain, ascend church steeples, monuments, &c.



Thomas Molineaux, a brutal English pugilist. Molineaux cared not to rise above the base desires of animal passion, and it is said, "he would wallow like a hog in mud and mire."

Aspiration differs from hope in these respects, that it is a desire which does not necessarily involve the element of expectation, and

that it is always directed to what is spiritual and elevated, whereas hope may be fixed upon the most unworthy objects.

The sign of this quality is a prominence of the nose at the lower part. When the nose lies flat to the face, and especially when it is wide as well as flat at the bottom, the inclinations are low and sensual. The preceding cut of Lavater, when compared with that of Molineaux, shows a marked contrast in the elevation of the nose. Cicero and Lincoln had both well defined noses, and in accordance with this sign, hung, as it were, like "a banner on the outer wall," we find them men of high aspirations, of great nobility of sentiment, and benevolence of action. In comparative physiognomy, the antelope may be cited as having a prominent and strongly marked nose, and as showing its noble aspirations by climbing the mountain side, in order that from some lofty height it may look down upon the expansive plains, and on the gentle slopes of the inferior eminences.

In contrast with these illustrations, we observe the Chinaman, whose nose is plastered or "spatted" down on his face, and whose highest desires scarcely rise to the dignity of aspirations. For him the grand new world of America is only a mart or a workshop, where he may hope to make a petty fortune, with which, on returning to the Celestial Empire, he can enjoy a life of indolence and sensuality. The negro has a low nose, and as might be expected from that fact, rarely engages in high enterprises which demand persistent and heroic effort to secure success. The flat noses of children are true indications of the inferiority and infrequency of their aspirations, as compared with those of adults. Those races which have made the most satisfactory progress in civilisation have possessed, as a national type, that configuration of the nose which I have shown to be the sign of aspiration. Noses of this shape are usually indicative of a kindly nature, while the flat noses, on the contrary, are the common mark of cruelty, sensuality, and destructiveness.

As a rule, the noses of women are less marked in the region of aspiration than those of men, a fact which is owing to their want of stimulus to develop the ardent desire for elevating activities. From time immemorial wedlock has been the only prize which has been offered to the ambition of the gentler sex. The following lines, which have never before been in print, or uttered in a lecture, are selected from the letter of a young lady to her friend, in which she complains of the agitating disappointments of her life. After bewailing the frustration of one of her matrimonial projects, she says:—

> "Imagine the struggle through which I contrived
> To abandon once more those delusions, short-lived,
> Which had painted the clouds with hope's glowing bow,
> So soon to dissolve in a fresh shower of woe!
> I intend to compose, on old virgins and nuns,
> Monks, muses, and all those unfortunate ones
> Who never have wed, a poetical jingle,
> To prove, beyond doubt, that they'd *rather* stay single.

With St. Paul for my captain, I could not be wrong,
Though I'd not learned in grief, what I'll soon teach in song;
Which last thought is drawn from a poet of fame,
Whose works I've forgotten, as well as his name.
I am weary of life, while I write you this rhyme,
The wreck of disease, and the victim of time;
With my desolate heart but a scorious field,
Which never again to my senses shall yield
Those marital buds, those tender young shoots,
And, I almost had added, those half-ripened fruits,
Which at one time beguiled me to hope that the day
Would arrive, when kind Hymen would lead me away.
Yet hope is long-lived, and when I again
Consider the millions of possible men,
Some half-blighted flowers will spring in my heart,
And the perfumes of Paradise faintly impart
To the odourless air of the desert around,
Till, withered untimely, they scatter the ground."

I am as far as possible from disparaging marriage, but I think the natural inclination of women to domestic life is not so feeble that it requires the artificial stimulations of a false and narrow system of education.

We owe not a little to the suffrage party for what it has already done in urging women to the highest possible development of every thing that is distinctive, strong-minded, and pure-hearted in their nature. It has propagated, even among its bitterest opponents, an improved manner of thinking and speaking of women, just as the Unitarian philosophy has contributed to liberalise the *interpretation* of the most orthodox creeds. Through the slow infiltration of its ideas it is the author of the dawning improvement in female education; its influence may be traced in the late ameliorations of sex legislation; it has already done much to remove the social barriers which have hitherto excluded women from many legitimate employments; and it was, in 1870, the silent though potential influence which induced the American Congress to place the female employees of the Government on the same footing as males.

Women have too long been considered as mere adjuncts of their fathers and husbands—as a means consecrated to parentage, and not as "an end in themselves." While every possible inducement has been offered to the stronger sex to pursue nature, art, and business, through all their endless labyrinths, woman has been bound hand and foot in an oriental harem, or tethered to a western hearthstone. If, under such circumstances, she ever obtained her desires, it was only by "more ways and turns than hunted nature knows." In Kotzebue's celebrated play of Pizarro, Elvira is made to utter a sentiment which reflects the indignation of many a woman even of the present day, in view of her contemptuous exclusion from all knowledge of her husband's business. When commanded by the conqueror to leave his presence because "men were to meet him, and on manly business," Elvira exclaims, "O men! men! ungrateful and perverse. O women! still affectionate, though wronged—the beings to whose eyes you turn for animation,

hope, and rapture, through the days of mirth and revelry, and on whose bosoms, in the hour of sore calamity, you seek for rest and consolation; them, when the pompous follies of your mean ambition are the question, you treat as playthings or as slaves."

Montaigne tells us that Francis of Brittany replied to a courtier who informed him that his contemplated spouse was home-bred and unlearned, that he liked her the better for that, since it was sufficient for a woman to distinguish between her husband's shirt and his doublet. This story illustrates the low estimation in which women were formerly held, but from which they are now more than beginning to be elevated. Let women have but something to do and to think about which is worthy of their energies, and they will have been inspired with that true dignity which is the only foundation of noble and aspirant living.

The aspirations of women, like those of men, may be multiplied and elevated by the companionship of the good and wise, by acquaintance with the historic records of the world's heroes, and by a life of self-restraint and beneficent activities.

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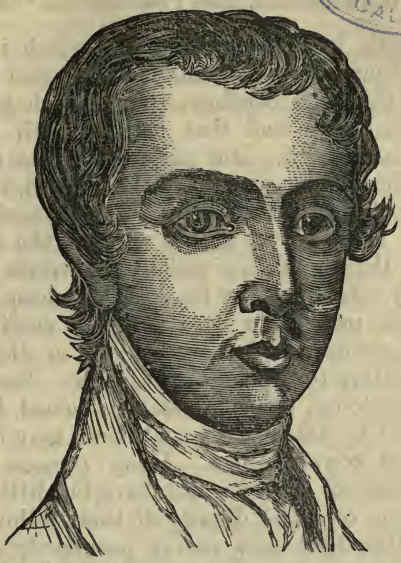

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Reverence.

"Those that I reverence, those I fear—the wise."—*Shakespere.*

There is so little in this jangled world which is really worthy of reverence, that we would seldom experience this sentiment, if we had not the faith to believe things much better than they are. Accordingly we find that persons with large reverence have usually large faith. But although these faculties are so often concomitant, and so intimately related, they are by no means identical. An individual may experience profound reverence for the God of nature without the exercise of any faith; for all those qualities which he reveres in his Creator may be clearly established by the light of reason. On the other hand, a person may show great faith by crediting monstrous stories, which excite wonder, amusement, or disgust, but which are not of a nature to appeal to reverence. For reverence is a sentiment of profound respect, softened, indeed, by affection, yet always enforced by fear. This sentiment may be exercised towards God, or towards man. Many persons who have the highest reverence for their Creator, have but little respect for the actions, opinions, or social dignity of their fellow-beings. This is sometimes the effect of a native peculiarity of their mental vision, which causes them to see little this side the heavens that is worthy of respect; and sometimes it is the result of an early education, by which they have been diligently trained in religious veneration, while they have been permitted to treat their associates, and even their parents, with selfish indifference, or open contempt.

A predisposition to veneration is indicated by a subdued tone of voice, a respectful manner, and a careful avoidance of harsh and contemptuous language. Reverence for the invisible God is usually found in conjunction with large faith, and hence is generally indicated by that elevation of the brows, which is the physiognomical sign of the latter quality; but respect for men, their institutions and dignities, requires comparatively little effort to realise the unseen, and is therefore sometimes found in conjunction with low eyebrows and small faith. A physiognomist will, nevertheless, readily discover the signs of this lower kind of veneration, as it always leads to social diffidence, and is expressed by an habitual lifting of the gaze above the eyes of the person addressed. A lack of this quality in any two persons will cause the four eyes to meet with a direct and penetrating expression, in which case neither party will be likely to show much flexibility, or submission of temper and facial expression. An excess of respect for men leads to timidity and servile

imitation; but for the Great Creator of all, it is impossible to experience too high a degree of reverence. Yet, while the sentiment of veneration is rarely too largely developed, it is often so unenlightened and misdirected as to lead to the superstitious worship of the heavenly bodies, of images, beasts, and stones. What is needed in this case is not the diminution of reverence, but the improving effect of a wise education, and direction of this faculty.

Reverence is largely congenital. Yet all the children of one family will not inherit the same degree of this faculty, owing to the different conditions of the parental minds antecedent to their birth. But although the natural disposition to veneration differs greatly in different persons, a judicious education will do much to give it proper development even in those with whom it is natively the most defective. This education should begin with the earliest acts of a child's intelligence; for if it is old enough to love its parents it is not too young to respect them. As it grows older and its character develops, it should not only be so trained as to regard its parents with respect, but it should in turn receive respect from its parents. Every character, so far as it is formed is, in one aspect of the case, individual, solitary, and independent. There is something in the simplest human consciousness that escapes the scrutiny and defies the dictation of the most penetrating and authoritative mind.

The child soon comes to a subtle, yet realising sense of this individuality; and if its nascent dignity is not respected, it will soon learn to despise the dignity of others. Hence I have always found that in those families where the children are strongly characterised by filial respect, the parents always practise respect for their children. Early training in respectful obedience gives to the manners of adults a graceful deference, a winning attention to the wishes of others, which is eminently useful, not only in securing friends, but in achieving business success. A want of this culture results in arrogance, rudeness, selfishness, and a constant habit of speaking with disparagement and contempt. There are few minds that will develop that veneration for the constitution and the laws of their country, which is essential to good citizenship, that have not been early trained in filial veneration. Respect for parents and respect for law are but different applications of the same sentiment, and to be trained in one is to be prepared for the other.

Lord Bacon indicates the bearings of this faculty on politics, in the oft quoted remark—"When quarrels and factions are carried on openly, it is a sign that the reverence of government is lost." No person can permanently enjoy the respect of others who has not adorned his character with those qualities which

are intrinsically worthy of respect. As for beauty, "it is as summer fruits, easy to corrupt, and which cannot last;" while wealth is even more precarious, for if it should chance to escape the moth and the rust, it is liable to be eaten up by taxes, insurance, and repairs. These things pass away like the leaves, and those who rest their hopes thereon, will some day wake to find their honours vanished, "and none so poor to do them reverence."

To the development of a proper amount of reverence it is not only necessary that children should be taught *what* they should respect, but *why* they should respect it. If they are told, without any reason for the prohibition, that they must not eat of a certain berry, they will be likely to despise, or at least to forget or neglect the admonition; but if they are further instructed that the forbidden fruit is a fatal poison, they will be watchful to avoid the certain death. It is on the same principle that they will fail to learn the true worship of God unless they are affectingly informed respecting those Divine attributes which are worthy of their reverence, and fully understand what effect the practice of noble veneration will have on their own lives and spirits. The worship of the Creator not only elevates the soul but impresses the social virtues of our race. It makes men happier and better; it exalts the expression of the human countenance, and actually elevates some of its more moveable parts.

The contemplation and study of nature is singularly adapted to the cultivation of veneration for God. Said Newton—"An undevout astronomer is mad;" and even the classic mythologists described the highest link of Nature's chain as fastened to Jupiter's throne. The august planets circling in their majestic orbits, and the tiny infusoria which hide behind their immeasurable littleness, all speak to the soul of God.

He is the life-giving essence, the infinite soul of all that exists. He is the God of *all* nations, though scientific and spiritual truth will yet have to make great progress before this simple fact will be so apprehended as to result in the universal conception of a truly Catholic Deity. As it is, most individuals and most nations worship a divinity more or less characterised by their own peculiarities. The Chinese conceive of God as a great Chinaman, who shaves as they do, has oblique eyes, and wears a queue. The Africans, when they rise to the conception of a personal God, picture Him as a negro with woolly locks, a flat nose, and ebony skin; and the Indian conceives of the Great Spirit as a mighty Indian chief.

I have never yet seen a white man who believed that God was an Indian or a negro, but there are few, even of this favoured

race, who do not, however unconsciously, conceive of Him as possessed of the physical characteristics, and as governed by the opinions and modes of thought which distinguish the Caucasian family. Yet it is clear that we cannot bear a material resemblance to an immaterial Deity. The poetic and beautiful idea that we are made in the image of God can therefore mean no more than that we are a feeble reflection of His intellectual and moral being. The man who forms his ideas of the Creator from a wide and profound study of His works rises above all local conceptions respecting his nature.

> "Slave to no sect, he takes no private road,
> But looks through Nature up to Nature's God."

He perceives that that Infinite Being who is Creator of all must be the God of universal nature. In every living thing he sees an infusion of His life, and in every material form an expression of His intelligence.

Allow me now to ask your attention to the consideration of that power of mind which instantly perceives truth, and which may be denominated

The Intuitive Faculty.

Intuition has been vividly described as a "fine instinct of the reason;" in other words, it is a high mental exercise which is often none the less logical because it is so rapid as to defy analytical scrutiny. Since the publication of Lord Bacon's *Novum Organum*, the inductive philosophy, founded as it is upon observation and reason, has enjoyed an almost undisputed supremacy; yet even in recent times some of the most profound and valuable additions to scientific truth have been due to the intuitive *deductive* system. Thus, for instance, Black's great discovery of latent caloric (which, it has been supposed, led to the still greater revelation, that force, like matter, is indestructible), was evidently independent of empiricism; for the heat which disappears when bodies assume a less solid form under thermal influence, evades the most delicate practical tests.

While I am as far as possible from disparaging that noble, scientific method which ascends from particulars to generalities, from facts to principles, and which, in the language of Harvey, makes "Nature herself the most faithful interpreter of her own secrets," I would yet give due honour to the opposite system, which, assuming principles that have been intuitively perceived, make them the basis of subsequent conclusions. Indeed, when we come to consider it, the much-vaunted observation and reason of the inductive philosophy are founded on certain ultimate ideas intuitively apprehended. Experience, for example, can

only show that a thing exists; it can never prove that it exists universally, or in consequence of some other thing. Universality and causality are, therefore, intuitive ideas, or, according to the Kantian philosophy, categories of the understanding—subjective conditions or laws under which alone it is enabled to operate. Even the most sceptical of German metaphysicians, such as Fichte and Hegel, were obliged to base their several schemes upon an *à priori* postulate. Fichte deduced everything from the mind's own activity, declaring that there was nothing except the *me* of which we could be truly conscious; and Hegel went still further, for, according to him, there is absolutely nothing real but thought; and the only way, therefore, in which we can *know* ourselves is by *thinking* ourselves. Yet the philosophies of both these men are necessarily based upon personal consciousness, which is an intuitive perception. The ultimate ideas of science are intuitive. In a remarkable work which Herbert Spencer has called "First Principles of a New System of Philosophy," the author shows, on the most irrefragable evidence, that space, time, motion, force, and matter, are all rigorously inconceivable, and that they are accepted, not on logical proof, but in virtue of indestructible intuitions.

The power of discerning truth immediately, or without the aid of the ordinary means of knowledge, is as important in social life as in philosophy or science. It is the mysterious secret of many of the phenomena which society presents, and furnishes an explanation of some of the most peculiar relations and distinctions of the sexes. Those persons who possess the intuitive faculty in a high degree will exhibit great impressibility of temperament, and although they cannot, for want of positivity of character, inspire those around them with their own emotions, and dictate to their own will, they will be enabled, by their superior sensibility, to enter into the closest sympathy with their companions, and thus intuitively to understand their states of mind. Possessed, therefore, of a knowledge to which the impressive, unsympathetic class cannot attain, they can adapt themselves to every taste, and anticipate every wish; and should they, through inadvertence or mistake, offend where they wish to please, they can instinctively detect the error, and change their mode of operation. In society, impressive men (if their manners do justice to their temperament) are found to exert a mysterious fascination, while impressible persons, (if their sense is equal to their sensibility), will enjoy the possession of an excellent tact. These two classes, therefore, while they derive their power from very different sources, may both exert an equal influence. As a rule, man is more impressive, and woman more impressible or sympathetic. A man who loves with ardour will, consciously

or unconsciously, exert such an active influence upon the object of his affections that she will scarcely fail to experience something of that warmth which fills his own heart. Thus, women form attachments for men with whom they might have associated for years without one thought of love, had they not been impressed by the evidences of that passion which they had themselves inspired. No such impressive power is possessed by the gentler sex. On the contrary, the advance of love on their part has always been esteemed detrimental to their cause; for, since they cannot by pure energy of feeling awake in those whom they love an answering sentiment, self-exposure inclines men to play the critic and the tyrant. In the power, however, of securing affection, woman is more than compensated for her deficiency in impressiveness by her superiority in impressibility. When possessed of a highly intuitive organization, she can discern with almost absolute certainty the effect of all that occurs upon those who interest her heart, and is thus enabled to choose the means to effect her purposes with more address than men who are far better versed in scheming; just as a reckless child can walk more securely in the light than the most careful adult in impenetrable darkness. To the intuitive mind, hypocrisy and affectation stand unveiled. The merely impulsive character is but an indifferent judge of dissimulation, but for the impressible temperament the avenue of information is mysteriously broadened.

In saying thus much to prove that the intuitive faculty is not only useful, but indispensable, I have not been blind to the fact that it is peculiarly liable to error. As an instance, I need only to mention the ludicrous part which it has been made to play in the woman's rights agitation. Every crude idea which has been advanced by the female suffragists upon finance and natural rights, upon law, equity, and social science, has been justified as an intuitive perception. The result of all this nonsense has been that the movement has fallen into unmerited contempt with many who were disposed to give it favourable consideration. The attempt has been frequently made to draw an essential distinction between reason and intuition; but it appears to me that the difference between them is one of quality and application, not of kind. Human beings unquestionably possess some of the instincts of the lower animals, such as the generative propensity, the disposition to suck immediately after birth, and that tendency to repeat an accustomed act, which we term the law of habit. On the other hand, it is equally certain that the lower animals share some of our intuitions, as, for example, the intuition that black is not white. Our apprehension that two and two are four, is an admitted intuition, yet it is not

less instantaneous and independent of deliberation than our acknowledged instincts. It differs from the latter only in the fact that it is based upon previous appprehensions, and in the high and varied uses to which it can be applied by the reflective mind of man. Instincts, therefore, whether in human or animal psychology, may be defined as belonging to that class of intuitions which relate strictly to the preservation of the species, and which do not demand previous knowledge as the basis of the intuitional act. For the sake of convenience, they may be distinguished as instinctive intuitions.

Dr. W. L. Lindsay, an eminent Scottish physician and animal psychologist, maintains, as I think successfully, that the minds of animals are of the same piece with our own; that upon close observation and analysis, they display the incipience of all our faculties, and are liable to all our mental derangements. This view casts an interesting though imperfect light upon much in the animal kingdom which we have been accustomed to regard as purely instinctive. If animals really possess minds which differ from our own only in the degree of their development, it can scarcely be doubted that something of genuine forecast, judgment, and even intellectual intuition mingles with those automatic actions which are generally termed instincts, but which we have above designated as instinctive intuitions. This thought, which has been only the recent result of laborious scientific research, was long ago conceived by the lively imagination of Matthew Prior.

> "Tell me why the ant
> 'Mid summer's plenty thinks of winter's want?
> By constant journeys careful to prepare
> Her full stores, and bring home the corny ear?
> By what instruction does she bite the grain,
> Lest, hid in earth, and taking root again,
> It might elude the foresight of her care?
> Instinct in every insect's deeds appear
> The marks of thought, contrivance, hope, and fear."

The swallow that builds her nest in some safe retreat, lining its interior with downy feathers; the wild goose, that, from afar, foretells the coming winter and precedes it southward; the bee, the ant, and the squirrel, that, with skilful industry, lay by abundant stores for future use; the caterpillar, that so assiduously weaves its winter house; the tarantula, that builds her domicile with door complete, that she may rear her young in safety,—all these, perhaps, display some finer sense than mere automatic instinct. It may well be that the Universal Father has compensated the "mute creation" for their defective reason by some rare intellectual gift unknown to us, some mysterious power which prompts the cattle of the fields to avoid each

poisonous plant, whose baleful properties are only known to us by slow experiment, and with intuitive prevision repair to wholesome food.

> "In the nice bee what sense, so subtly true,
> From poisonous herbs extracts the healing dew
> Let us, then,
> Learn from the birds what food the thicket yields;
> Learn from the beasts the physic of the fields;
> Thy arts of building from the bee receive:
> Learn of the mole to plow, the worm to weave."

Instinct, like reason and intuition, is liable to deception. The fly, for instance, misled by the odour of the *stapedia hirsuta*, which resembles that of putrifying meat, will deposit her eggs in its flower—an error by which she causes her young to perish from want of food.

The intuitive faculty is indicated by a number of physiognomical signs, one of the most prominent of which is the height of the forehead. The inferior intuitional power of the lower animals is expressed in the fact that their heads do not rise high above their eyes. Another sign of this faculty is a large, bright, and widely opening eye. Women have larger eyes in proportion to their size than men, and their intuitive power is correspondingly developed.

It sometimes happens that fasting or disease, by exaggerating the nervous susceptibilities, temporarily increases the less noble expressions of intuitional power; but to develop this or any other faculty by the sacrifice of health is to pay too dear for gold. The only way in which the clearness of our intuitions can be safely, usefully, and permanently enhanced, is by the harmonious development of every physical and mental power. An excessive elevation of the nervous system may result in a marked increase of intuitional perceptions, but persons thus abnormally endowed will lack the character, the health, the intellect, and the practicality to apply their gift to any truly useful purpose. On the other hand, the great practical value of faithful intuitions has been more or less consciously realized by almost every person who has attained eminence in any sphere of life.

I shall now consider some of the principles and facts of

Faith.

Whenever we take anything for granted, we exercise the faculty of faith; it may therefore be defined as the power by which the mind gives assent to anything that is not or cannot be proved either by observation or reason. In other words, it is the capacity for positive belief, without positive proof.

It is distinguished, in different individuals, not only by the

degree of its development, but also by the subjects upon which it is exercised. Thus, an uninformed and grovelling mind may express great faith by a full and ready acceptance of idle reports and abject superstitions, and yet be altogether indifferent, if not positively hostile, to the mysteries of spirituality. In such a case, ignorance, or a general combination of qualities resulting in low and vulgar tastes, disinclines the mind to spiritual contemplations, and hence to spiritual faith; for it is clear that a man can exercise this faculty only within the sphere of his thought and feeling. On the other hand, when a studious and critical intellect accompanies a great development of this power, the man will be investigating and incredulous on social and scientific subjects, and trustful in matters of religion. This anomaly was strongly exbibited in the characters of Hugh Miller, Pascal, and Newton. In all those considerations, which fall within the legitimate sphere of reason, they were as critical as they were profound, but the whole tenor of their minds strongly inclined them to spiritual contemplation. They were apt to linger with elevated passion upon those vague yet lofty ideas which reason fails to contradict, because they are entirely without its sphere, and in that dim land of thought, where "the sense of mortals snaps with overstraining," they gladly accepted the guidance of inspiration, and enjoyed the unrivalled blessedness of spiritual faith. "The heart," said Pascal, "has reasons which the reason knows nothing about;" and in so saying, he *used* his reason to justify his neglect of it. One of the most curious instances of scepticism upon some subjects, united with a facile credence upon others, is found in the character of Dr. Samuel Johnson, who refused to believe in the earthquake of Lisbon, though he credited the story of the Cock Lane Ghost.

Faith is the connecting link between the judgment and the impulses, and is physiognomically indicated by the elevation of the eyebrow immediately above the eye. When the faculty is large, the brows are so much raised as to cause a wide space between them and the organ of vision. This conformation is observable among the Chinese, who are more grossly superstitious than any other nation that has attained the same degree of enlightenment. They seek the guidance and protection of their wooden Joss in all matters pertaining to social and business life, kneeling before it with a burning stick in each hand, and sincerely imploring its benign compassion. The proposition, by chickens are ye saved, would seem to be one of their articles of faith, since they place the fowls upon the graves of their dead the first night after burial, in the full hope and expectation that they will assist the spirits of the departed.

When the eyebrow is close down to the eye, the person will

exhibit little taste for the wonderful, and decided scepticism concerning the mysterious or unknown.

All nations, and indeed all individuals possess a certain amount of faith, but it usually reaches its greatest development among the stupid and ignorant. Thus, the North American Indian and the Negro exhibit a high degree of this faculty. Before the invention of the printing press had resulted in the improvement and general diffusion of letters, the masses were so besotted with the passion for the miraculous that they often accepted the extravagant creations of an untrained fancy in preference to the clear demonstrations of observation and reason. The excitement which attended the birth of a Silesian child, said to be born with a golden tooth, is a curious instance of this fact. All Europe was thrown into consternation by the supposed portent, and the agitation was not allayed until, in 1595, a learned doctor declared that the event was prognostic of the golden age, in which the Turks should be driven from Christendom. In confirmation of this cheering news, the savant declared that the occurrence was clearly intimated in the second chapter of Daniel, where we find the description of a statue with a golden head. Even in our own age and country this vulgar taste for the wonderful continues to obtain with the lower classes. The immense number of our patent medicines, and the success which their vendors enjoy, is in itself an appalling proof of the gullibility of our people. Yet we may hopefully look forward to the time when free schools and cheap books and papers will have so advanced the education of the people that nothing will be generally believed which is contradicted by intelligent investigation.

As I have said, the ignorant and stupid are commonly the most endowed with faith, but a high degree of this power sometimes accompanies the finest intellectual gifts. This was the case with Swedenborg, who possessed great confidence in his own inspirations. Christians and Mahommedans often indicate a considerable development of this faculty, and it also belongs to that class of inventors who spring intuitively at conclusions in which they obstinately believe, notwithstanding the repeated failure of their experimental proofs. Charles Goodyear belonged to this class. Through long years of indigence, of disappointment, and public contempt, he maintained that he could produce the induration of caoutchouc, and form from the hardened substance a thousand useful appliances. All the world knows that his efforts were finally crowned with success, but not before he had won his title to be calendared with the saints of science, and enriched the history of his life with pathos and heroism. Those persons are always gifted in faith who enjoy the mysterious, and

who are easily astonished. Accordingly we find that women have more faith than men, and children more than women. The excess of this faculty in children is often still further exaggerated by the pernicious custom of exciting their imagination by fairy and ghost stories, which early mis-educate their taste and confound their judgment.

The exaggeration or misapplication of this power has led to so many and disastrous opinions, that a regiment of books would scarcely suffice to record them. Prominent among the superstitions of the past we may number the general belief in the talismanic influences of stones, animals, medicines, ceremonies and imaginary beings. " 'Twas a history handed from ages down—a nurse's tale, which children open eyed and mouthed devoured: and thus, as garrulous ignorance related, they learned it and believed."

Among the Greeks, Theophrastus early promulgated the opinion that crystals produced after their kind, and throughout all the east it was generally believed that stones were possessed of mystic virtues. St. Jerome earnestly declared that " the sapphire conciliated to its wearer the condescension of princes, quells his enemies, disperses sorceries, sets free the captive, and even assuages the wrath of God." The Romans were accustomed to powder amber with attar of roses to cure deafness, and the Arabs have recourse to a cold slab of blood-stone to counteract the bite of a scorpion. We learn that Archbishop Parker presented Queen Elizabeth with an agate, as a prophylactic charm, and as late as the early part of the 17th century, Bœthius de Boote wrote elaborate dissertations on the talismanic influences of stones, asserting, among other things, that precious stones are formed to be the abode of angels.

Dr. Livingstone illustrates the superstition of the Africans by an account of the Makolo, of whom he says, that " they have great faith in the power of medicine for every ill that flesh is heir to. Mamire is anxious to have children: he has six wives and only one boy, and he begs earnestly for child medicine. The mother of Skeletu came from the Barotse valley to see her son, thinks that she has lost flesh since Dr. Livingstone was here before, and asks for the medicine of fatness."—" *Narrative of an Expedition to the Zambesi and its Tributaries,*" *by David and Charles Livingstone,* p. 295.

The East Indian believes that if the shadow of one of a lower caste falls on his person, it reduces his chances of heaven, unless he hasten to atone for the misfortune, by daubing himself with mud, and pounding his whole body into a caricature of humanity.

When I visited Vancouver's Island, I found a tribe of Indians

who believe in a Sochille Tyhe, or great chief, that will command them after death in a celestial hunting ground. They place beads, kettles, blankets, wampum, and instruments of war in the graves of their dead, that their wants may be duly supplied in a future world; and I am told that in former times they did not scruple to honour a person of distinction by burying with him a living slave. Old settlers in British Columbia have assured me that it was once the custom with the natives of that country, to secure a man's future happiness by burying his wife with him. Ten thousand instances could be mentioned where faith, unregulated by reason, has led men to slaughter, and women to sacrifice their dearest friends. At the present day there are many ignorant persons who believe in the most ridiculous omens, as, for example, that seeing the new moon over the right shoulder will bring good luck for the month, or that if a cat turn its tail to the fire it will rain on the morrow.

The evils which result from the excesses of faith have been most prominently illustrated in the history of religion. It is estimated that the number of victims of the Spanish Inquisition, from 1481 to 1808, amounted to 341,021. In Protestant countries the same spirit of persecution has been manifested. After the Scottish covenant had been drawn up in 1557, the nobles took the name of "lords of the congregation," and enacted that the third attendance upon mass should be punished with death. In Holland, the Arminians were persecuted by the Calvinists, and in Scotland the Presbyterians suffered from the Episcopalians. It was not until 1781 that the Roman Catholic worship was permitted in Sweden, and even in the United States of America the Puritans once drowned their brethren for witch-craft.

These are the *abuses* of faith; its *uses* are many and important. Its extraordinary development in children is of the highest value, since it prompts them to give their guardians that respect and confidence without which it is impossible to govern them aright.

It is the principle which enables the husband and wife to repose in each other's fidelity. It is the key-stone of all credit business, and, indeed, of every species of confidence in our fellow-men.

It is by faith that we accept on the authority of others, a host of scientific, social, and historic facts, which no single man could personally investigate, but which are essential to a liberal education and practical success. Without this faculty we should have no assurance of the continued operation of the laws of nature, and, except for its lofty promptings, we should never enjoy the unique—the ineffable happiness of communion with God and angels.

THE SUBJOINED REQUEST WAS PRESENTED TO DR. J. SIMMS, AND PRINTED IN THE "DAILY TELEGRAPH" OF LONDON, JANUARY 2, 1875:—

LONDON, ENGLAND, *November,* 1873.

To Dr. J. SIMMS, of New York.

The course of fifteen unique lectures that you have so ably delivered to deeply-interested audiences in London, have created an unusual interest in the study of Physiognomy, as manifested in Man, Animal, and Vegetable Life.

The principles of Physiognomy that you have given during the lectures we believe to be new, philosophical, and correct, and if generally adopted and lived in accordance with, by the people, would promote the most worthy interests of humanity and improve the species.

As a testimonial of our esteem and respect, we cordially invite you to visit London again, at your earliest convenience, and favour us with another course of your instructive and valuable lectures.

Gentlemen.

W. G. Smith, Artist for Press.
W. W. Newbould, Clergyman.
James Kitchen, Esq.
G. A. Beavis, Architect.
Mr. S. Mortimer.
J. Ashman, Principal of the Psychopathic Institution, 254 Marylebone Road.
H. D. Croney, 24 Colville Rd.
Thomas Edwards, 98 Gloucester Crescent.
Walter H. James, Esq.
John Pierce, Lawyer.
Putman Dolly, Editor.
Rev. C. Thorn, D.D., LL.D.
Samuel Ray, M.D.
A. G. Harewood, Teacher.
L. E. Gladstone, M.A.
Thomas Court, Author.
Freeman Hoist, Banker.
John Banks Nicklin, Esq., Civil Engineer.
William Shuff.
Richard Robinson, Esq., Civil Service.
C. O. Groom Napier, F.G.S., Author of the "Book of Nature" and the "Book of Man."
Wm. Radford, Builder, Bayswater, W., London.
W. Davey, Stationer.
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Rev. J. C. Gloucester.
Edward Ward, Civil Service Clerk, General Post-Office.
Edward J. Grant, Sculptor.
H. Secker, Professor of Music.
Stephen Longman, M.D.
John Clark.
Henry Ashman, M.D.
Peter Horace, M.D.
H. Newington, M.D.
Rev. Thomas Page.
Charles Leamington, M.D.
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Preston Jones, B.A.
Edward Russell, M.D.
P. S. Runnels, Clergyman.
C. Mill, Author.
H. Spencer, Author.
R. E. Cooper, M.D.
A. W. Norman, Esq., Her Majesty's Civil Service.
G. E. Norman, Esq., Her Majesty's Civil Service.
David Stevenson.
Alexander Hays.
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Henry C. Porter, M D.
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Rev. Edw. Y. Grover, LL.D.
L. Conway, Esq.
P. T. Carloth, Esq.
R. C. Yates, Esq.
A. S. Harvey, M.D.
Rev. C. J. Becker, D.D.
Rev. H. E. Roland, LL.D.
W. Alloway.

Ladies.

Miss E. M'Ewen, Principal of St. John's Training School.
Caroline Bishop, Teacher.
Annie Randall, Teacher.
Emma Pettit, Teacher.
Caroline Randall, Teacher.
Sarah Page, Teacher.
Margaret Scott, Teacher.
S. Le Cherolin, Teacher,
G. Cherolin, Teacher.
Helen Grosvenor.
Fanny Jones, Teacher.
Susan Delaney, Vocalist.
Harriet Crosby.
Emma Foster.
Catherine Thomas.
V. Gray, Authoress.
Mrs. Lewen.
Miss Haitt.
Miss Julia Smyth.
Ellen James.
Lilly James.
Elizabeth Edwards.
Alice de Lay.
Elizabeth Sheaf.
Rosina Simpson.
Emma Marson.
C. Bentley.
Mrs. Goff.
Susannah Whiting.
Jane Mansefield.
Mary Noel, Musical Teacher.
Mary Dunn.
D. Thomas.
L. Robinson.
Amy Wingrove.
Annie E. T. Skeet, Governess.
Catherine T. Carroll, Wife of Rev. T. de la Cour Carroll.
Miss Jane de la Cour Carroll.
Miss Elizabeth C. Carroll.
Miss Nellie Hawthorne.
Adettie Pratcy, Authoress.
Kate Byper, Vocalist.
Caroline Toogood.
Fannie Samson.
Hannah Samson.
E. Perker.
Catherine Johnson.
S. A. Butler.
Mary Wallace, Teacher.
Amarantha Collins.
Delane Denton.
Janette Bright.
Pink Cobden.
Julia Gibson.
Emma Doyle.
Grace Trueman.
A. Alford.
L. Thorne.
Mrs. S. U. Barrett.
Eveline Rose Barrett.
Lucy Abrams.
J. Gardner.
H. Gardner.
S. Skeet.
T. Adams, Authoress.
G. Trueman, Music Teacher.
Patrie Oates.
Susan Rae.
Caroline Mackie.
D. Abbey.
H. Moth.
R. H. Bell.
Pauline Durat.
E. Craig.
E. Marchant.
Ellen Foley.
Annie Hays.
M. A. Norman.
R. G. Dryden.
M. A. Sorrell.
L. Rucklaw.
M. Dryden.
A. L. Sorrell.
Mrs. Bentley.

Eleven hundred and seventy-three names of ladies and gentlemen, in various professions and occupations, have been omitted for the want of room.

The following was taken from the "North British Daily Mail," of Glasgow, of Aug. 14, 1873:—

CITY HALL, GLASGOW, *June*, 1873.

DR. SIMMS.—DEAR SIR,—Before you leave our City, allow us to offer our warm congratulation for the success which has attended your Course of Lectures here. It is not every one who can draw together such appreciative audiences at this season of the year. Your readings of character of persons, whose antecedents you could know nought of, are wonderful, and have been much talked about; while the tact and versatility of every one of your Lectures are praiseworthy, and do you great credit. You are justly entitled to a vote of thanks for your instructive, amusing, and intellectual treat, and we ask you to cross the Atlantic again and favour us with one more series of your Lectures. We wish you all success.

John Walker, Merchant.
John S. Stout, Merchant.
James Wallace, Merchant.
John Tweed, Publisher.
David Hamilton, Manufacturer.
Rev. J. S. Gordon, D.D., Incumbent of St. Andrew's.
W. H. Stephens, Manager.
David B. Fleming, Electrotypist, &c.
George Wm. Wheeler, accountant.
Angus H. Mackay, Accountant.
Wm. T. Borland, Esq.
John Bower, Engraver.
William Brown, Clerk and Cashier.
J. A. Ferguson, Esq.
Rev. Robert Thomson, Minister of Wellpark Established (Ladywell Street) Church of Scotland.
Seabourne H. Hanton, Artist.
John Waldie, Contractor.
James Miller, Stationer.
Horatio Thomson, Artist,
Wm. Basset, Editor *Masonic News*.
Mary Torrance, Lady.
Mary Stout, do.
James Bain, Manager.
J. B. Macnair, Photo. Artist.
Thos. Darwin Humphreys, Ph.D., M.A., author and editor.
Jas. Balfour, Scribe C, 73.
William Dempster, Esq.
J. Johnstone, Ship Agent.
Robert Thom, Stationer.
Robert M'Williams, Merchant.
Hay Nisbet, Letterpress Printer.
J. H. Roger, Merchant.
William Orr, Merchant.
James Bowman, Photo. Artist.
Charles M'Ewan, Merchant.
John Ramsay, Esq.
Wm. Paton, Royal Albert Hotel.

The annexed petition appeared in the "Scotsman," Edinburgh, July 14, 1873:—

EDINBURGH, SCOTLAND, G.B., *July 12th*, 1873.

To Dr. J. SIMMS, of New York, who has been delivering a Course of Lectures on Physiognomy and Physiology in the Masonic Hall, Edinburgh, during the past two weeks.

DEAR SIR,—We, the undersigned, take pleasure in recommending your lectures to the people of Britain, as well as to the entire world. We also believe you to be a gentleman having the noblest wishes for humanity at heart, while endeavouring to promulgate a new system of Physiognomy that is true to nature, and cannot fail of being productive of good among individuals, communities, and nations, wherever it becomes understood and practised. We earnestly invite you to return to Edinburgh, and deliver another course of your instructive and entertaining Lectures, at your earliest convenience.

Jas. M'Laren, Gen. Superintendent, N. B. Railway Co.
Peter Wood, Writer.
James Bell, Engineer.
G. Gilbert, Telegraph Engineer, North British Railway Co.
Norman Macbeth, A.R.S.A., Artist.
J. Laurie, Esq.
Rev. Robert Brewin, Minister Park Place Church.
Lilly Lodge, Lady.
H. Strachan, Private Tutor.
E. Mackennie, Music Teacher.
R. Pringle, Lithographer.
A. Fraser, Druggist.
Ed. Silway, Accountant Clerk, General Post Office.
Jessie Maughan, Lady.
Bessie Stevenson, do.
Margaret Smith, do.
Mary M. Smith, do.
Hume Fred. Chancellor, Insurance Clerk.
Cecilia Henrietta Balfour, Lady.
Jemima Hetherington, do.
Richard F. Armstrong, Assistant Superintendent Prudential Insurance Co.
Ada Wight, Lady.
Pauline G. Gladstone, do.
James R. S. Wallace, Law Clerk.
Donald J. M'Allum, M.D., Surgeon Madras Army.
Hugh Armstrong, Lawyer.
Geo. Mitchelson, Bookseller.
J. G. Kellow, Clerk, North British Railway.
John M'Ilvenna, N.B. Railway [Co.
J. Park, do.
Thomas Fisher, do.
John S. Pitcairn, do.
John Black, do.
Walter Wilson, do.
John Whitelaw, do.
James Baird, do.
David James Glen, do.
William Marwick, do.
W. M. Starling, do.
Colin Macdonal, do.
John Greig, Office-keeper, do.
William Sutherland, do.
Duncan Storrar, do.
Wm. Burnett, Inspector, do
Robert Leslie, do.
Robert Thomson, Clerk, do.
Robert Gibb, do.
D. Philp, do.
John M'Call, do.
Stewart Adam, do.
Frank Richards, Gentleman.
Eliza Maughan, Artist.
Edith M. Lodge, Lady.
Louisa Fulton, do.
Alice Fulton, do.
Mary Jeanie Bryce do.
Isabel King, do.
M. Brunker, do.
E. E. West, do.
M. Jackson, do.
A. Green, do.
F. L. Green, do.
P. James, do.
A. E. Gilbert, Inspector.
W. Raffin, do.
Thomas Hobson, Lineman, do.
R. Hare, Clerk, do.
C. Foreman, Telegraph Inspector, do.
H. Fairbairn, Telegraphist N. B. Railway Co.
Kate P. Ridley, do.
A. Gardner, do.
H. Stewart, do.
A. Mitchell, do.
Aggie Walton, do.
Jennie Smith, Lady.
Jessie C. Wilson, do.
Mary D. Campbell, do.
Maria Gelletley, Merchant.
Sarah Scott Gregory, Teacher, Music.
Jane Baillie Cairns, do.
Mary Macbeth, Lady.
Mary Walker Macbeth, do.
Lelia Elliot, do.
Edward King, 2 Nicolson Sq.
Thomas C. Martin, Clerk.
Albert John Reid, do.
Walter Reid, Seal Engraver.
Andw. Main, 13 West Mayfield.
John Somerville, Esq.
Andrew Aikman, Merchant.
W. M. Bryce, Esq.
John Neil, Esq.
G. J. Laurie, Esq.
George Scott, Esq.
John Peebles, Esq.
John Meldrum, Tradesman.
Thomas Cranmer, do.
Percival Snow, Gentleman.
John Grant, M.D.
Celia Howard, Lady.
Partis S. Crane, do.
Bella Stewart, do.
Janet Stewart, do.
Caroline Maughan, Teacher.
James Muir, Clerk, 10 Windmill Street.
And many others.

A FEW OF THE MANY NOTICES, GIVEN BY THE LONDON PRESS, OF DR. J. SIMMS' LECTURES IN THE METROPOLIS :—

ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND, LONDON, ENGLAND, NOV. 11, 1873.—Professor Busk, F.R.S., President, in the chair.—Dr. Simms, of New York, gave a most interesting and instructive communication on a flattened skull from Mameluke Island, Columbia River, and described minutely the practice of flattening the head in infancy. In reply to questions put to him, he said that the flattening does not seem to cause pain; that males and females are treated alike, although it had been supposed only males were so treated; that flattening is not apparently transmitted from parents to children; and that, judging from the general intelligence of the native Indians, the practice does not seem in any way to affect the brain, or injure the health of the people.—*Nature*, a Journal of Science.

ANTHROPOLOGICAL INSTITUTE.—The Anthropological Institute of Great Britain and Ireland opened its session for 1873-4 on Nov. 11, at the Rooms, No. 4 St. Martin's Lane. The President, Professor Busk, F.R.S., occupied the chair. A most interesting oral communication was made by Dr. Simms, of New York, on a flattened skull which he had brought from the Island of Mameluke, in the river Columbia. Bodies are not buried in the ground in that district, but, after being bound up in buckskin, are piled one above another on the island, which is used as a burial-ground. A framework of planks is used to keep the bodies in position. He examined many hundreds of skulls, all flattened, and he also examined heads of living people, and inquired how the flattening was accomplished. A board is placed across the frontal and another across the occipital bone when the child is a few hours old, and the flattening has generally become permanent in nine months, when the boards are removed. The following important facts were mentioned:—The flattening does not seem to cause pain; males and females are treated alike, though it has been supposed only males of a certain class received the "honour of flattening." The flattening is not apparently transmitted from parents to children; and, judging by the general acuteness of the Indians, the practice does not seem to affect the brain.—*The Hour*, a daily, of London.

Dr. Simms' lectures at Westbourne Hall are a decided success. We have never seen this Hall so crowded as on Tuesday last, when this popular lecturer delivered his truly popular lecture on physiognomy and physiology. To all desirous of passing a really intellectual and interesting evening we would advise a visit to Westbourne Hall.—*West London Times*.

POPULAR SCIENTIFIC LECTURES.—Every evening of last and each evening of this week Dr. Simms has delivered lectures in London to large and highly-appreciative audiences of the *elite* and delighted. The audience who were able to gain admittance—as some evenings hundreds could not gain entrance, owing to the vast crowds—have received instruction in the Doctor's system of physiognomy which he has discovered, and will soon print for the public. Some evenings several reporters were busy taking the lecture in shorthand as it was delivered. The Doctor's system of physiognomy is strictly in harmony with nature and common sense, sustained with sound logic. The practical tests given by delineating character from the faces of subjects chosen or volunteers from the audience, at the close of each lecture, were given with remarkable facility, and were the very best proofs of the correctness of the new system of physiognomy. The Doctor has been hired to lecture for several associations and societies in London, before leaving to make a journey to Rome, Africa, Asia, &c.—*The Medium and Daybreak*, of London, November 13, 1873.

Testimonials of the Press of Britain, where Dr. Simms has lectured :—

LECTURE.—Last night, Dr. J. Simms, New York, delivered the first of a series of lectures on "Physiology and Physiognomy," in the Masonic Hall, which was crowded to excess, the audience including many ladies. For fully an hour the lecturer discoursed on "Physiognomy," adding interest to that subject by practical illustrations on persons from amongst the audience, the "reading" of whose characters was at once striking, instructive, and amusing. The remarks of the lecturer were further illustrated by numerous diagrams and paintings which were hung on the walls.—*The Edinburgh Courant*.

LECTURE.—Last night Dr. J. Simms concluded a very successful series of lectures in the Masonic Hall. At the close, the lecturer was awarded a hearty vote of thanks.—*The Edinburgh Courant*, July 12, 1873.

PHYSIOGNOMY.—Last night, Dr. Simms. the American physiognomist, delivered the last of a course of nine lectures on the above subject, in the Freemasons' Hall, George Street. During his visit to Edinburgh he has been attended by considerable numbers of people, who desire to have the opinion of an expert as to their capabilities. character. and disposition. The lecture last evening was delivered to a crowded audience.—*The Daily Review*, of Edinburgh.

LECTURE ON PHYSIOGNOMY.—Last night, Dr. J. Simms, the well-known, eloquent, and amusing lecturer of New York, delivered an address in the Masonic Hall, George Street, on Physiognomy, or nature, mind, and beauty. The hall was crowded to excess. The main object of the lecture was to show that a close connection might be traced between physiognomy and character. The address was in several particulars sufficiently amusing, and was well received by the audience.—*The Scotsman*, of Edinburgh.

POPULAR LECTURES.—Dr. J. Simms, of New York, delivered the closing lecture of a series of nine lectures in the City Hall, on Physiognomy, Physiology, Geology, &c., on Saturday night last. The lectures have been very successful. The closing remark that the Doctor intended to visit Glasgow at some future time elicited repeated applause.—*The Evening Star*, of Glasgow.

SCIENTIFIC LECTURES.—Last Saturday night, Dr. J. Simms, of New York, delivered the last of a series of nine lectures on Physiology, Physiognomy, Geology, &c., in the City Hall. Large and intelligent audiences have attended the lectures, which have been highly successful. The closing remark of the Doctor, that he hoped to revisit Glasgow at some future day and deliver another course of lectures, was greeted with applause.—*The North British Daily Mail*, of Glasgow.

LIBRARY OF THE UNIVERSITY OF CALIFORNIA

PHYSIOGNOMICAL PRINCIPLES.

A LECTURE,

By J. SIMMS, M.D., of New-York.

In approaching the science of Physiognomy, the intelligent observer cannot fail to perceive the great comprehensiveness of its range. The mysterious operations of nature, from the lowliest forms of organic or inorganic existence upwards, have enlisted in their service every atom of the universe to aid in the production of the crowning effort—Man. This wondrous outcome of the action of inscrutable agencies operating throughout the lapse of nameless and inconceivable periods of time, is the masterpiece of the great Artist—a work founded and reared upon the experiences of less complex and less exquisite performances, and one in which all the excellencies of the grand scheme of the universe are focused and reproduced.

To trace the processes by which matter has been elaborated and transformed into so exquisite a piece of mechanism as is exhibited in the structure of Man, is a power which does not come entirely within the range of the human intellect; but we are able at all events to note the effects of these mysterious operations, to discern the intimate connection which subsists between mind and matter, and note the numberless ways in which the one acts and reacts upon the other. We can see that the human machine is but an agglomeration of matter of different kinds variously distributed, and so arranged as to produce the ever-varying phenomena of character and thought which the human family exhibits. We are enabled to discover that what is called "character" is simply the natural result of the workings of well-defined physical laws, set in motion by the various blending of some ingredients with others in the composition of the human frame. A slight apparent inequality in the distribution of the various kinds of matter may show seemingly disproportionate results in conformation of character; but this seeming inconsistency embodies a fundamental principle of natural action, which it is of vital importance to keep in view. To illustrate this, an analogy not very remote may be found in the laboratory of the chemist. We find there that in mixing

various ingredients the results are largely dependent upon the proportions of the materials. A trifle more of one constituent, or a little less of another, entirely alters the character of the compound; not only apparently in degree, but in colour, taste, smell, and consistency. The hyposulphurous, sulphurous, and sulphuric are three acids widely differing from each other in the properties they possess, and the uses to which they are put; and yet all three are composed of the same basis of sulphur and oxygen, with no very strongly marked difference in blend. The first is the result of the junction of one-half of sulphur and one-half of oxygen; the second is composed of one-third of sulphur and two-thirds of oxygen; while the third and last is made up of one-fourth of sulphur and three-fourths of oxygen. The brilliant and much-prized diamond would seem in appearance to have little in common with a block of coal; and yet the only claim to difference or superiority possessed by the former lies in the fact of its having a few more grains of carbon entering into its composition. The burning of a piece of wood, and the rusting of a bar of iron, seem to have little connection; and yet the processes are identical so far—the one being the oxidation of wood, and the other the oxidation of iron. Precisely the same phenomena are observable in the operations carried on in the great laboratory of nature, of which the production of the immensely varied types of humanity is by far the most elaborate and important. A slight preponderance of the rocky ingredients of which bone is mainly composed gives to the character of the individual a great preponderance of the characteristics of perseverance, steadfastness, and plodding industry. Discourage the development of bone, and let the muscular element obtain the ascendancy by ever so little, and the instincts will be found strongly tending to the mobile, the amorous, and the passional. The varieties of colour and complexion are all ruled by the varied distribution of matter entering into the structure of the frame; and every conceivable condition is in some way or other the result of the action of matter, or of exposure to sun-light or rarified air, which are only more subtle and less tangible material essences. Hair is black or red, simply because the elements of iron or sulphur respectively predominate. The venous or blue blood differs from the arterial or red, only in virtue of its possession of a few more grains of carbon—of which the loss of a very little, with the substitution of a small quantity of oxygen effects the transformation into arterial blood, capable of sustaining the vital principle of life. The slightest augmentation or diminution of any of the elements which make up the human structure wields a vast power over the individual, and influences every act, look, gesture, and aspiration of his life. The key to the phenomena of the mind is therefore the study of matter, and

its relative distribution in the fabric of man—a branch of edu cation which is now making rapid progress in the well-established formulæ of Physiognomy.

Having thus based the deductions which are about to be drawn upon the broad and intelligible principles of chemistry and nature, we shall proceed to consider *seriatim* the five great distinctive departments of faculties which appear in the great human family. In doing so, let it be borne in mind that these distinctions are necessarily arbitrary to some extent, inasmuch as though well defined in most subjects, they are but feeble and shadowy in others; the one form being blended and dovetailed into the other with every conceivable variety of proportion.

The first form into the details of which we shall enter is the Abdominal. The man in whom the abdominal form has the ascendancy is of the rotund, barrel-shaped, and ventricose habit of body. He bears about with him a sleepy, lazy aspect, in virtue of the inherent inertia of the mass of matter which is his prevailing bodily characteristic. In obedience to the law of supply and demand, he is furnished with a large mouth to suit the dimensions of the alimentary canal by which the food is conveyed to the interior; and fully to carry out the idea of rotundity, he has large plethoric cheeks and a capacious swelling chin. He abounds in the adipose, which is essentially inactive; and it is much owing to this that his inclinations are towards indolence and inaction. The abdomen has assigned to it the function of collecting and assimilating the food necessary for the preservation of the life of the bodily republic; it is incessantly calling out for more, and absorbing all that comes within its reach. It performs precisely the same functions as do the leaves and roots of plants in drawing from the soil and the air the various ingredients which are necessary to their growth. As chief of the commissariat department, the abdomen is essentially active; but in other respects its functions tend quite in an opposite direction. Abounding in moisture, it has a strong affinity for everything moist, and confers a humid aspect upon the individual in which it is strongly developed. The gastric juice, which largely abounds in this form, consists of 98 per cent. of water, ½ per cent. of chloride of sodium (common salt), and 1½ per cent. of hydrochloric acid. The operation of digestion produces a mass of disorderly inorganic material; and this state of things is faithfully reproduced in the mind of the largely-developed of this form, presenting a chaos of confused images with only one well-defined aim in the front ground—that of greed and self-appropriation. If the digestive organs are healthy, and the muscular form in a condition to absorb the fresh tissue offered to it, the abdominal has a tendency to spread the central ideas of rotundity and fulness round the whole of the corporation.

The mental characteristics which this form promotes are—strong predelictions for ease of body and mind, with the single exception of activity where the needs of the stomach are concerned; great love of sleep; and, as before observed, much confusion of ideas, in consequence of the heterogeneous character of the materials which are being assimilated and digested by the stomach. Good representative examples of this form were found in Crassus, a co-triumvir of Pompey and Julius Cæsar, also in Dionysius, the tyrant of the Heracleots. At the present moment we have a fine illustrative example in the Tichborne "Claimant," whose whole occupation for some years has been to cry out for more.

We now come to a consideration of the Thoracic form, which is essentially that of activity. The outward manifestations of the largely-developed in this form are capacious lung and heart cavities, ruddy complexion, evincing the presence of a full tide of crimson life; also expansive and flashing nostrils. Earthy ingredients do not enter so largely into this form as into the abdominal—the leading constituents being blood and air, of which there are full supplies, and the presence of which accounts readily for the restless activity of those who are largely developed in this form. The constituents of blood are—

Water,	78·02
Blood Globules,	13·50
Fibrin,	0·30
Albumen,	6·70
Salts,	0·90
Fatty Matter,	0·58
	100

These main ingredients of blood and air are present in so overpowering a volume, and preserve so unceasing a race throughout the frame, that it is impossible to conceive how a man highly developed in the thoracic region can be otherwise than restless and volatile in the extreme. Though this form is by far the most active of the five, its action is generally vacillating, ill-directed, and unsteady; consequently to a very great extent barren of commendable results, unless one or two of the corrective forms can be fostered and developed sufficiently to restore a healthy balance. The man of great thoracic development, unqualified by corresponding strength in the other forms, is unstable and changeable, yet ambitious and aspiring. He abounds in the will of courage, and he is at times eager in the pursuit of fame. He enters upon new enterprises with praiseworthy zeal and energy; yet it needs but slight inducement to turn his wayward inclinations into another channel. He is of a dashing and enthusiastic type, and has an ever-recur-

ring thirst for worldly elevation and eternal fame, although lacking sadly the perseverance necessary for obtaining either. He is in his element when in the midst of warfare and strife; this form being essentially that of war, antagonism, and fiery debate. When harmoniously combined with the muscular, it finds a more profitable outlet for its surplus energy in the field of commercial enterprise and adventure. Unqualified with any corrective, it unfits its possessor for study, by reason of the impossibility of assuming the quietude which is essential to a successful student. The hours of sleep bring such persons nearest to a condition of inactivity; but even then visions of struggle and adventure pass before them in dreams. From ancient history, as examples of men of fully-developed thoracic form, we may take Cyrus the elder, who was the founder of the Persian Empire, and also Cyrus the younger. These men found little satisfaction except in struggle and strife, and both fell victims to their vigorous but ill-directed ambition.

The next form that demands consideration is the Muscular or Propagative. Those excessively endowed in this respect will not uncommonly be found possessed of bow legs, even although the person may appear to be of slight build. Short-legged dwarfs have very often strong muscular upper frames, with arms disproportionately long and fibrous. The distinctive characteristic of this form is excess of fibrous material, exhibiting itself in sinews of iron-like strength, stretching in bands throughout the entire structure. As the thoracic is the form of the electrical, so is that presently under consideration the form of the magnetic and attractive. In woman it finds relatively a much stronger development than in man, and it is in virtue of this peculiarity that she is in possession of the magnetism or attraction which is exercised on the other sex. Still, muscular action being essentially contradictory, and the tendency of the muscles being to work at cross purposes with each other, this attraction which woman possesses, and which the muscular of the opposite sex also exhibits in a modified degree, is not inherently lasting. It attracts in order, as it were, to repel again. By reason of the excessive muscular development of woman, it is almost a necessity of life to them to have some excuse for flexing the muscles. It is to this cause we must assign their propensity for bearing their arms akimbo—a mannerism utterly foreign to the majority of the other sex—and the necessity they seem to be under, when they walk abroad, of taking with them a basket, a purse, a handkerchief, or some other article whereon to exercise the fingers. The muscular is also the form of the fickle and changeable—characteristics which have been applied to the gentler sex from time immemorial. The muscles are the only parts of the human machinery that

are immediately under the control of the will, and in consequence are its representatives in physiognomical expression; and they may thus be compared to the national army obeying the behests of the head of the state. This form is essentially that of the amorous; the whole range of the seductive charms of love being intimately connected with muscular vigour. The proclivities which a development of this form fosters in the mind of the individual are those in which the muscles are brought into play, or by the exercise of which the fibrous system experiences pleasing thrills of emotion or passion. A man so formed loves to dance and wanton about, to jump, run, strike, or lift. He is especially devoted to music, which thrills him to the very core. He is, however, always contradictory, never satisfied long, and ever on the search for new scenes and enjoyments.

Fresh muscle is made up of seventy-seven per cent. of fresh water, and the chemical composition of dry muscle is fifty-four per cent. of carbon, seven per cent. of hydrogen, twenty-one per cent. of oxygen, and fifteen per cent. of nitrogen; there being also traces of sulphur, phosphorus, and some alkalies. Most of the labourers and artisans of the British Islands are strongly inclined to the muscular form of development, because of the great manufacturing industries which have prevailed for several generations; also, because of the humidity of the climate and the consequent obstruction of the sun's rays—conditions which stimulate the muscular, and at the same time fetter the osseous or bone form, which would otherwise act as an antidote or corrective. For examples of excessive development of the muscular, we have Caius Marius, a Roman general, who was possessed of such astounding muscular strength that he could tow a pair of horses backwards when exerting their full strength in the opposite direction; and this by means solely of the little finger of his right hand. If we may credit Flavius Vopiscus, the Emperor Aurelian must have had muscles of the texture of steel, since he clove forty-eight of the Sarmatians in one day, and afterwards, during desultory skirmishing, multiplied the trophies of his personal prowess to the number of nine hundred and fifty. We are also told by the same writer that this second Hercules slew, with his own hand, seven hundred of the Franci, besides being the unaided captor of three hundred prisoners. Richard Carew, in his book on the Survey of Cornwall, tells us of a wonderful fellow, one of his tenants, John Ray by name, who would make light of carrying a six bushel sack of wheat flour—fifteen gallons to the bushel—with a miller of full weight and dimensions hanging on to the load. The same writer relates of another wondrous Cornishman, that he could fling the carcase of an ox over his shoulder and carry it off with as much ease as an ordinary man would have taken up that of a lamb.

The Osseous or Bony Form, which comes next in turn, represents in the human structure the rocky or mineral element of nature, which, in this its more elaborated condition, retains all the characteristics which it possesses before it leaves its inorganic abode. Bone is composed of fifty-eight per cent. of phosphate of lime, nine per cent. of carbonate of lime, and thirty-three per cent. of animal tissue. Being therefore largely made up of those constituents which form the component parts of the hardest of rock strata, it follows as a natural consequence that men in whom the bony form is in the ascendant, exhibit the same qualities of stability which the rock itself displays in the recesses of the everlasting hills. This predominance of rocky material, whether manifested in the crust of the earth, or in the more complex structure of the human frame work, ever retains precisely the same qualities, and we have no more beautiful illustration in nature of the influence exercised by matter over mind, than in the characters of men possessing a full development of the form now under consideration. Such individuals will be found to possess strongly marked features, with salient facial protuberances. They have hollow temples, prominent cheek bones, and ponderous jaws, which are however more long than thick. They are frequently knock-kneed and broad shouldered, while they generally possess attenuated hands, with large knuckles, and usually lean, lank, and gaunt visages and figures. The bony form is essentially that of mechanical, constructive, and matter-of-fact people. It is eminently practical, antagonistic to sentiment, claptrap, or humbug; and in its contempt for musical, amorous, or passional concerns, it is the very antipodes of the muscular. It confers firmness, decision, perseverance, modesty, steadiness, endurance, plodding industry, and impregnable obstinacy where principle is involved. It is careful and assured in its steps and movements. It is dangerous to attempt to hustle or push it about, in which cases it is apt to prove an ugly customer to the intruder. The will of decision and obstinacy has here its fullest development, and you may search in vain for any symptoms of vacillation or irresolution. A bitter enemy to the tyranny of strength over weakness, and an unswerving conservator of the rights to which it deems itself entitled, it becomes not only an efficient protector of its own property, but a redresser of the wrongs of others less able to fight their own battles. As the form of the mechanical and constructive, it loves to go straight at the object at which it aims; and it is in all things honest and straightforward. Unbending, unyielding, indomitable, and impervious to the discouragements of prospective difficulty and danger, it becomes the pioneer of civilisation in its encroachments upon barbarism and savagery. It is plain and blunt in appearance, yet observant of passing events,

and acute in utilising conjectures for the furtherance of its ends. Cool, collected, thoughtful, and unobtrusive, it holds the passions thoroughly under control; and being the least visionary of all the forms, it is the one under whose banner we must seek to find the vast majority of men who, from the beginning of time, have ruled and left their mark upon the world. From ancient records, we may take as representatives of the osseous or bony form, such as Marcus Porcius Cato, surnamed the Censor, remarkable for the high qualities which this form superinduces, and also his grandson and namesake, surnamed Uticensis, who became proverbial for straightforwardness and integrity. Aristides, Julius Drusus, Asclepidorus, Ilapius, Mares, Domninas, and Heraclitus, were all of this form, and all were eminent for the characteristics with which it is associated.

The fifth and last of the five great structures is the Brain form, which includes the nervous system, and the machinery of sensation. Brain matter is made up of sixty-six per cent. of carbon, ten per cent. of hydrogen, nineteen per cent. of oxygen, two per cent. of nitrogen, and nine-tenths of one per cent. of phosphorus. A preponderating development of this form exhibits itself in sharp features, lean visage, and a relatively large head. This is the form to which belong sensations and susceptibilities. Those inordinately endowed with brain form, uncounteracted by a sufficient development of the others, have an excessive capacity for enjoyment, while on the other hand, they are at the mercy of all causes of suffering to a painful degree. Such people are morbidly sensitive in their feelings, and become alike burdensome to themselves, and an intolerable nuisance to their friends. Nervous action is entirely subservient to exciting influences of whatever kind; and wherever brain is very much in the ascendant, with activity of the nervous system, the individual is the sport of mere circumstances. Accompanied, however, with proportionate growth in the other forms, large brain is the most elevative element in the human structure, and is capable of producing the noblest of fruits. The other forms are shared in common with the lower animals; but in the possession of brain, man stands pre-eminent, towering far above everything in creation. Persons of this make are quick to acquire knowledge; facile in mimicry, and apt at taking on the polish of the higher society in which they may mix. They are, however, irritable, opinionated, and oversensitive; changeable as the weathercock, vain, and, by means of these failings and frailties, easily moulded to the will of others, becoming as clay in the hands of the potter. The possession of large brain relatively is not by any means an unqualified blessing; and it is only when it is accompanied by an adequate development of the other forms that the *summum bonum* is attained. As illustrative examples of higher and more

equalised development of brain form may be mentioned Demosthenes; Fernae Lopez, the Portuguese chronicler; Cæsare Guilio Scaliger, the elder, and his son; also Joseph Juste Scaliger, the French philologist; Jean Jacques Rousseau; Schiller; and Immanuel Kant.

The value of Physiognomy as a branch of the ordinary educational curriculum is very much enhanced by the fact that there is no insuperable difficulty to be encountered in toning down inordinately developed forms, or in cultivating and maturing others which have been stunted in their growth, so as to produce that equality or totality of progress in all, which is most conducive to the happiness and well-being of the individual. All this is easy of attainment where the principles of the science are well understood, and thorough adherence given to the necessary prescriptions. Should the abdominal form be deficient in power, as was the case with Cicero in his youth, it may be strengthened and set a-growing by gymnastics, much exercise in the open air, and strict adherence to a plain and wholesome regimen. Cicero was an eminent example of the successful renovation of a weak and faulty construction. By judicious training, the crudities of his stomach were overcome, and an originally harsh and croaking enunciation was transformed into a voice sweet and sonorous as that of an angel. Julius Cæsar was originally afflicted with many bodily infirmities; but by persevering in a course and plain diet, and by marching and roughing it in the camp, he acquired that symmetry of constitution to which his many achievements were mainly due. But for the cultivation which we maintain is within the reach of all, the unrivalled eloquence of Cicero would have been unheard, and the prowess of Julius Cæsar would have been unsung. A sufficiency of plain diet, moderate sleep, and judiciously regulated exercise cannot fail in rehabilitating and strengthening the tissues of the stomach.

The Thoracic or Breathing form may be enlarged by habitual and judiciously arranged exercises which will bring into greater action the muscles of the heart and lungs, walking, jumping, using the spirometer and other similar expedients.

The muscular and fibrous form may be cultivated by gymnastics, or any occupation requiring the exercise of strength, such as lifting weights, dancing, and taking long walks, combined with proper quantities of food and rest.

The Bony or Osseous form will receive additional development by slow and laborious exercise in sunlight, riding on horseback, and drinking calcareous water.

To stimulate the Brain or nerve form it is necessary to partake largely of pleasures and amusements which interest and delight the senses. Spectacles, brilliant society, the contemplation of

the beauties of nature and art; inhaling delightful odours, and drinking in the enchantments of melody; theatres, schools, pleasure excursions, soul-stirring oratory, and the bustle, excitement, and gaiety of city life are all conducive to the development of the nervous system, the enlargement of the frontal brain, and the increase of the sensational part of the entire frame.

The gigantic results which scientific progress has achieved within the last half century, leave little room for any other hypothesis than that the present perfection of man has been slowly evolved through the lapse of an inconceivable number of ages. Everything tends to show that the development of the earlier and later progenitors of mankind must have been through a succession of ages, each in turn characterised by the predominant conditions of the five forms which have been described. The first age must have been that of the abdominal or watery, when our progenitors were denizens of the sea, and breathed no air direct from the atmosphere; but by means of gills, separated the air which finds lodgment between the particles of water. This was the age of the stomach, when the whole force of a feeble instinct was directed to gluttony and greed, being precisely the characteristics which we find at the present day in the creatures of that element which was our ancient abode. In that first stage of existence the abdominal was all in all; and as yet there was but small promise of the other forms, in a feeble circulation of cold blood, and the most rudimentary of osseous frame-works. As the obstructive vapours of the upper air gradually dissolved, these organisms were more and more attracted to the surface of the water. The influence of the sun enlarged the bone structure, and pointed the way to further progress. The lungs became enlarged, and slowly acquired the power of breathing the atmospheric air direct, while the gills became first disused, and ultimately inoperative. The temperature of the blood changed with these changing conditions, and there gradually emerged the living representative of the Thoracic age, full of warm blood and life, breathing the upper air—though like the porpoise and whale, still an inhabitant of the deep—bringing forth the young alive, and careering through ocean's depths with restless energy and activity. During these processes the bones became slowly enlarged; but becoming less and less confined to the aquatic, and approaching nearer and nearer to the amphibious, fresh demands were made upon the muscular development of the animal in his excursions upon dry land. Probably timorous and unassured in these first encroachments on his future domain, he chose night rather than day for leaving his ancient element, and thus gave an impetus to the muscular which the absence of the sunlight prevented the osseous from sharing. Finally abandoning the water, but still

regarded and regarding himself as an intruder, he adopts the land as his permanent abode; and avoiding the glare of the sun during the day, and hunting for prey during the night, he enters upon the muscular or propagative age with muscles fully developed in the struggle for existence, but with the bones as yet diminutive and scanty. Long ages rolled on in a fugitive and predatory existence of this kind, until gradually acquiring more confidence as he finds himself qualified to hold his own amongst his fellow inhabitants of the earth, he begins, almost imperceptibly, to be transformed from a prowler by night, and a skulker by day, into a more orderly citizen of the world, earning his living in daylight and resting at night. Habitual exposure to the sun encourages the growth of the bones, and at the same time counteracts the undue development of the muscles which have been reigning supreme. At this epoch, too, it is not improbable that some conjuncture, such as scarcity of carnivorous food, may have evolved the capacity for living on the produce of the soil, instead of that of the chase. The change from constant darkness to a daily participation in the joyousness of nature, last of all enlarges the powers of sensation, and slowly but surely begins to infuse glimmerings of reason into the man. The bone element is meantime developing rapidly, and with it the qualifications for orderly living and steady improvement; until the muscular having succumbed or become secondary, our now well advanced progenitor steps into the osseous or bony stage of existence, attended with fair promises of further advancement.

Surveying the world as it at present exists, we find in the different races of mankind every gradation of progress from the less intellectual to the higher forms. Of those furthest advanced, it may be said, that having lived through the osseous age, so favourable to progress and advancement, they are now merging into the brain or sensational epoch, while other less-favoured races still lag far behind. The ratio of progress has undoubtedly varied at various times and in various climates according to the influences of accident, or those of isolation or intermixture. A totality of progress—that is to say, a progress which embraces, simultaneously, the whole of the forms, and carries them on abreast, as it were, in their march to perfection, has taken place very early in the world's history, and then only to a very limited degree, these happy instances being the results, not of premeditation and education, but of the temporary combination of favourable circumstances as liable to be suddenly broken up as they had been suddenly called into united action. Influences favourable to the development of one only of the forms, have hitherto conferred their benefits on this one form at the expense of all the others. This effect of partiality is not an

incurable disease, although, during unscientific times, nothing was known of an antidote, and, little indeed, even of the nature of the evil itself. To modern times has been left the triumph of showing, by the clear light of physiognomical research that totality of progress is not only possible, but easy of accomplishment, and within the reach of all who will take the trouble of following the simple rules laid down.

When the face reaches forward very much, and it would seem as if most of the head occupied a position in advance of the ears, it will be found that the possessor of these peculiarities,—more especially if accompanied by jaws which are long anteriorly,—is the devotee of advancement in culture and science. When the visage towers heavenward, he is still aspiring and progressive, but somewhat tainted with an inordinate appraisement of himself and his belongings; he is largely opinionated, conceited, and ambitious. If the whole of the features have an inclination towards the centre of gravity, and droop to the earth after the fashion of the weeping willow, it may safely be surmised that he is of the earth, earthly; mean, grovelling, and destitute of worthy aspirations. Nature faithfully preserves throughout her domain uniformity of indication, and it is safe to pronounce as noble, anything stretching upwards; mean and contemptible, whatever tends to return to the embrace of earth. As examples, we would cite the alligator, which rises farther away from the earth than a snake, and is a higher type of life; the hog is borne higher from earth and is superior to either, yet inferior to the sheep that leaves earth farther below, and yet rising less nobly in the scale of mind than the horse, exactly in ratio to the distance they depart from earth; while man, taller and more erect than either in proportion to his weight, is vastly superior to any other animal.

The effect of any excess on the different faculties of man, is invariably the creation of confusion for the time being. No exception to this general rule has yet been discovered, and the logical probability seems to be that there is none to discover. Great conflagrations, sudden floods, financial crashes and epidemics, are all creative of confusion and panic, simply because these different manifestations are so gigantic, that the various faculties to which they appeal, unable to accommodate so much material on so short a notice, become stunned, stupified, and inoperative. It does not follow that the larger the organ, the more the capacity for the reception, and the less the degree of confusion. On the contrary, diminutive faculties are incapable of suddenly receiving a sufficiently large amount of impression to produce confusion; and consequently large bodily organs, and large receivers for the special senses are much more provocative of chaos in the mind, by reason of the facility with which they

take in inordinate quantities of feeling and sensation. The man of excessive abdominal development is constantly supplying his stomach with ill-arranged masses of assimilative material. The over-worked organ distributes throughout the frame imperfectly elaborated blood, and tissue-forming substances, in large and badly regulated quantities. This heterogeneous mixture acting upon the brain, reproduces there a picture of itself, in confused, muddled, and totally impracticable efforts of thought. The necessary concomitants of an avaricious stomach of this description, are, a large mouth wherewith to receive the loads of food that are offered to it; powerful masseter and temporal muscles for efficient mastication, and a capacious alimentary canal by which to convey this heavy load to its destination in the interior. Reasoning thus from cause to effect, we find that as a large stomach requires large quantities of food, which are directly productive of confusion of mind, so the presence of a large alimentary canal and an expansive mouth, being excessive in size only because of the stomachic requirements, are indicative of confusion of ideas. A large mouth may be therefore accepted as fair evidence of mental disorder. A familiar example is to be found in the great majority of the emancipated negroes of America, the extent of whose inanity and stupidity is only to be matched by their expanse of mouth, and the alarming array of gums and teeth which they can display. It is but just, however, to remark that a man may possess a large mouth, indicating originally large abdomen and confusion of thought, while these defects no longer exist, in virtue of the judicious training and self-restraint to which he has subjected himself. The corrective forms have been cultivated, while the excess of the abdominal has been restrained; and what was difficult of performance at first, has now, by physiognomical education become easy and natural. The original outward sign remains, in a modified degree however, but its function is now governed and reasonably restrained. There is no confusion of thought in a man of healthy constitution, suddenly and accidentally brought to the brink of starvation. He is a man of one idea for the time—that being how to satisfy the cravings of hunger. The starving tiger is not distracted by the momentary question of whether he will have antelope or elephant for supper. His wishes are simply concentrated upon having something to eat, he cares not what. The story of the donkey between two hayricks, dying of starvation, because, unable to make up his mind which to begin upon, is apocryphal, a clear head and empty stomach being nearly synonymous terms.

Excess of thoracic development, as evidenced by a very large nose and expansive nostrils, causes the admission into the lungs of an undue quantity of air, and produces what

may be called the confusion of activity, affecting both body and mind. This may be remedied by the same judicious restraint and cultivation recommended in the other cases. Relatively large eyes take in more expanse of surface, but convey to the mind less clear conceptions of the objects seen than small or moderately sized ones. The former admit the rays of light so rapidly and in such quantities to the retina, that the brain fails to analyse or comprehend the superabundance proffered to it, and temporary stupefaction rather than enlightened is the result. People possessing cumbrously large eyes, will be found, when desirous of examining anything minutely, puckering their eyebrows, and partially closing the eyelids, which is simply nature's way of circumscribing the area of vision, and thus concentrating their powers upon a limited surface of inspection. Action of this kind is a necessity to mechanics and artificers almost every minute of their working time; and it is conceivable that several generations of unmixed industrials of this class would eventuate in the production of a race possessing powers of vision, limited in area, but piercing in strength. The eye of the ox is well suited for his requirements. It is large and expansive for the purpose of viewing an extensive surface of grass, a slight inspection of which enables him to decide on that most congenial to his tastes. The deer and antelope possess excessively large eyes. as they require to take in a still more extensive area of grass-producing surface; but that this largeness is obtained at the expense of clearness of vision is apparent from the ease with which they are startled by any strange object they are unable to comprehend. The eagle is furnished with a far-reaching but narrow range of vision from the necessity it is under of espying its prey at great distances. Very large ears are apt to receive too many of the vibratory waves of sound at once, and distinctness of hearing is thus rendered impossible. Small ears receive no more than they have capacity for, but the quantity is so moderate and easily handled that the feeblest modulation is received on the tympanum. Great noise in the immediate vicinity of ears, even of suitable size and construction, conveys nothing definite, because of the concentrated rush of sound overpowering the acoustic machinery for the time. Donkeys are possessed of very large ears, and are easily startled by any noise of sufficient volume to produce confusion. At the battle of Shiloh in the late civil war in the States, some sumpter donkeys took to their heels at the first opening of the cannonade. Excess has the same tendency everywhere throughout the range of the faculties. Great pressure on any part of the body seems to paralyse the sense of contact, and render its presence vague and indistinct: while the gentlest pressure of the hand conveys the most unequivocal impressions of touch. Steal upon a man

from behind and deal him a heavy blow, and you will produce unconsciousness or great confusion: but attempt gently to insinuate your hand into his pocket, and with clearness of mind he detects you.

Notwithstanding the countless millions that have lived and died, probably no two features ever existed which were exactly similar in every way; but the wonder should not be that this never has happened, for when we consider how much men are the victims of circumstances of a million different hues, it will be admitted that hardly anything short of a first class miracle would suffice for the accomplishment of one instance of exact similarity. Some of the races which have remained isolated for many centuries still possess considerable uniformity of complexion, but the great mass of the population of the world exhibits specimens of every gradation, from swarthy black to snowy white. The purest, or more properly unmixed races, are probably the Jewish, the Indian, and the Negro, which individually retain a similarity of feature and colour that will be sought for in vain in races of less conservative habits. The intermixture of race has certainly been designed as a means for the perfection of mankind at large. In small outlying islets, boasting perhaps at most two or three hundred inhabitants, the frequent consequences of similarity of blood are idiocy and insanity, while the general intellectual standard sinks to the lowest possible level. The end of all this, if unremedied by the infusion of fresh blood, is depopulation and extinction. There are many small uninhabited islets in the British seas that were once teeming with life and energy. Happily there is naturally implanted in the human breast, a predeliction for the opposites of a man's own characteristics, and if breadth of choice be allowed him, he will choose a wife in obedience to this divinely ordained law. The union of opposites is attended with the most beneficial results. A dark man naturally prefers a fair-haired maiden, and *vice versa*. The prejudice against the African negroes which is evinced by the Caucasian races would be found, if thoroughly examined, to have its root, not so much in colour as in form. There are black people with good features and well made bodies, and they must be pronounced handsome. The union of widely separated races seems highly favourable to intellectual growth. Henry Rowe Schoolcroft, the eminent American philologist, was blessed with a highly gifted lady who was the offspring of the union of an Irish gentleman with the daughter of an Indian chief. The blood of Pocahontas coursed in the veins of John Randolph, one of the most talented of American senators. At the present time there are several members of Congress who have sprung from a mixed ancestry of black and white; and Frederick Douglas, who is justly considered as one of America's greatest orators, is a

mulatto. The issue of a union of black and white is various, and the intermarriage of different races in temperate climates produces endless variety of hue in eyes, hair, and complexion. There can be little doubt that the representative Caucasian type had its origin in the temperate region of Circassia, from the union of Asiatics and Africans. It is a very great mistake for the more highly polished races to look down with contempt upon those less favoured. All have points of exceptional excellence. All have their appointed duties to perform, and the lowest in the scale of progress may possibly possess some little peculiar advantage, which the highest might borrow with advantage. In their own way all are contributing their quota to the advancement of the world at large; but for the attainment of the highest perfection there can be little doubt that the most powerful lever is the steady encouragement of intermixture—race with race, and a determined hostility to the foolish prejudice which has so long barred the way to a combination so favourable to progress and improvement. The greater the intermixture of one type of humanity with another the more rapidly will man come to know the broad universe and its contents as a whole, and the less prone will he be to indulge in contempt for everything different from himself and his belongings. We should endeavour to bear in mind that everything in nature—absolutely everything—is from the hands of God himself, and must have been sent for some purpose of wisdom. Even evil has its uses. How should we have been able to estimate virtue if its antitheses had been unknown? But for extremes comparison would have been impossible. We could have had no ideas concerning white if no other colour had existed. The fool, the madman—aye, even the criminal, should all be shielded from this feeling of absolute contempt. They are *all* fulfilling their allotted task in obedience to the sway of matter over mind; and nothing more eulogistic can scientifically be said of the brightest ornament of the senate or the bar. There is no avenue by which we can escape from the influence of matter except by annihilation, which is equivalent to saying the thing is impossible. Matter is the living spring of action itself, and no hostile or antagonistic attitude towards it can be productive of aught but disaster. It may be coaxed, however, and in skilful hands its obedience will know no bounds and experience no weariness. The grand science of Physiognomy has solved the difficulty, and transformed a mischievous and tyrannical master into a docile and obedient servant. The means of self-cultivation are within the reach of every one. There are no technicalities in Physiognomy to act as so many stumbling-blocks in the path. He who knows how to read may take his degree in the science at his own convenience; and ordinary diligence in the study and practice of Physiognomy will infallibly make him aware of his own defects, and point as unerringly to a certain cure.

UNIVERSITY

PHYSIOGNOMY,

OR,

SIGNS OF CHARACTER AS MANIFESTED

IN THE

HUMAN PHYSIQUE,

A LECTURE,

BY J. SIMMS, M.D., NEW YORK.

As we look up to the heavens on a cloudless night, before the moon has appeared above the horizon, we perceive a vast number of twinkling orbs, which at first sight appear very little different from each other. A more careful scrutiny, however, with the aid of a good telescope, leads us to the conclusion that no two of them are exactly alike; and so it is found throughout all the works of nature. Take from the sea-shore a handful of pebbles, and you cannot find two of them without a perceptible difference. Select, from among thousands, two grains of wheat, two blades of grass, two leaves from the forest trees, bearing the very nearest resemblance to each other, yet a careful inspection will reveal some unlikeness, and the closer your scrutiny, the greater will the dissimilarity appear. It is the same with the human family. There are many who, to a casual observer, especially of different race, seem to have faces cast in the same mould, but, to those who are familiar with these individuals, they appear not only distinct, but quite unlike each other. Not only so. A negro, for instance, may recognise, as different faces, a hundred that present no perceptible variety to the casual glance of a European, yet he may be ready to admit that some feature in one face is exactly like the corresponding one in another. The painter and sculptor, however, being accustomed to more minute observation, know that no two noses, or mouths, or eyes are precisely similar in all respects; and it is the business of the physiognomist to trace the relation between these varieties of feature, and the varieties of mind which are connected with them.

When we consider the numberless causes that act on the body, and especially on the features of the face, as apparently the most susceptible parts of the human frame, we cease to wonder that, among so many millions of people, there is no confusion of identity, but each has a countenance different from every other. Every object that affects the senses, every motion of the mind, every change of feeling, climate, altitude, face of the country, soil, associations, occupation, exposure, hardships, food, education, manners, sickness, remorse, solitude, morals, passions, and ideas of all kinds, tend each to mould the human countenance; while the combination of several or all of them produce that variety of feature from which we infer that no two are, or ever have been, or ever will be exactly alike.

Some individuals are thin and small from birth; and it ought to be more generally known, that this may be occasioned by the mother using purgative medicines during gestation, a practice which ought to be avoided by every mother who desires her children to be well grown and strong.

It would be endless to enumerate all the causes that conduce to form the human subject, and unfold animal life into character and thought. Man is the epitome of all life; even inorganic matter gives him her stamp, and holds sway over his inmost cogitations. To trace the working of all these influences, is the business of Physiognomy in its widest sense, which therefore lays under contribution, not only every power and principle of the created universe, but even the Great Creator himself. This gives sublimity as well as importance to the science; and we shall be raised to higher conceptions of its beauty and utility as our knowledge of the underlying principles becomes enlarged, and we are enabled to perceive how one capacity or faculty affects another; how they all act upon matter, and matter upon them again, reflecting its conditions on the human mind, until we perceive one grand chain of causes and effects, extending through the whole world of life, and linking all together. This chain has never lost a link, never suffered a break; it has always existed, and all eternity shall not know its termination. We can here point out only a few of the more obvious facts.

Cold modifies the countenance by contracting the commissure of the eyes, drawing down the brows, raising the shoulders and cheeks, and diminishing the length of the face, while it adds to its breadth. The warm blood that rushes to the head, produces an expansion which accounts for the large heads of the Laplanders, while cold may justly be held responsible for their small eyes. The chest also, in frigid zones, receives the blood which, through the extreme cold, cannot circulate freely in the limbs, and thus the thorax attains an unusual size. In milder climates, the

generous warmth relaxes the features, opens the eyes, and increases the size of the eye-balls; hence we find large eyes among the inhabitants of the torrid and warm temperate zones, as the Negroes, Spaniards, Italians, and Greeks. Nature here, as everywhere, displays her wisdom by relaxing the system, that perspiration may more readily take place, to relieve the body of superfluous material, while, under the pressure of cold, she closes the avenues. That narrowing of the commissures of the eyes we have mentioned, confines the visual organs to a more limited range, so that their entire force is expended within a comparatively small area; and the wisdom of the arrangement is seen in this, that it adapts the eyes to those mechanical and industrial trades which are peculiarly needful for the support of life in the colder climates, and which demand great strength of sight rather than a wide range of vision.

Surrounding objects are apt to impress the mind, and mould the features, as those who have few ideas will carry a vacant and unmeaning aspect. The dreary prairie and the wild forest give a corresponding expression to the countenances of those who inhabit them, as may be witnessed among the Indian tribes of America. Food is, however, one of the most powerful of those agents that distinguish different grades of civilisation, leaving traces of its action on the corporeal frame. Excessive feeding, especially on animal food, causes the person to become thick and broad, whereas eating with moderation, and on a diet chiefly vegetable and farinaceous, raises the spirits, and causes the individual to assume a tall and graceful figure. Starvation, continued through several generations, will make the teeth grow small and scattered, the reason being that nature destroys whatever is not used, and therefore gradually diminishes the masticating power, which scarcity of food has compelled to comparative idleness. Again, luxurious eating and drinking stimulates all the bodily secretions, and opens the pores. This, in a few generations, will cause the hair to become thin and scanty, as witnessed among royal families, and the descendants of luxurious livers, and for the reason, that the matter which otherwise would be concreted into hair is expelled through the pores. Moderate feeding conduces to a luxuriant growth of hair, and no better examples may be found than among the Irish peasantry, where the females generally exhibit a profusion of fine hair, that might well raise the envy of the votaries of fashion. There is, however, another agent in this business. Sunlight appears to be very favourable to hair growth, and the scalp which is constantly exposed to it is less liable to become bald in the decline of life. It is probably for this reason that an American Indian, who always goes bareheaded, never becomes

bald like the English gentleman, whose chimney-pot hat not only excludes the sunlight, but imposes such restraint on the venous circulation as produces feverishness in the scalp, and deciduous hair as the consequence.

Consecutive thinking, and high mental culture conduce to carry the centre of the face outwards and forwards from the hair to the point of the chin, because the sensations being chiefly seated here as a centre, it becomes enlarged by their continued exercise. Paucity of ideas will permit a general relaxation of all the muscles of the face, and render the sides of it broad. The lips of the savage become swollen through the grief, the passion, and the solitude which are incident to his life, and when the lips are considerably protruded, there is apt to be a corresponding depression of the nose, whereas a prominent nose is usually accompanied with a narrow face and thin lips. Lively company, and the intense emotions of civilised life tend to chisel out the features into this sharpness, and although such causes are slow in their operation, they nevertheless act with certainty through the generations of mankind. The delicate living of leisure life gives a softness of feature and refinement of expression in remarkable contrast with what is exhibited in those who fare hardly, and are much exposed to the inclemencies of the weather. Moreover, heavy labour expands the chest, raises the shoulders, and shortens the neck. Hence the common maxim that a long neck is the sign of high blood, which just means that labouring people, or those recently sprung from the labouring class, have generally shorter necks than persons descended from aristocratic idlers. Among mechanical occupations, agricultural industries, and professional avocations, each lends a peculiar aspect to the features; for every thought that passes through the mind affects the countenance more or less, and leaves traces of its subtile working in every lineament.

We have alluded but to a few of the most obvious and easily discerned workings of the numberless agencies which modify the character of human beings, and leave unmistakeable marks on the corporeal frame. These alone might produce endless variety of form and feature; but when we remember that these agencies are numberless, and capable of a vast variety of combination, can it any longer appear wonderful that no two human beings are exactly alike in any single feature?

Principles precede signs of character, as the rays of light darting across the eastern horizon go before the full appearance of the sun. We know by such signs to expect his rising; and he gives not one signal but thousands of them. The myriads of rays come sparkling and flitting over the sky, and continue increasing in number and in strength till the golden glory rests on

the mountain tops, and crimson fringes are flung along the clouds, and the welcome of morning awakens glens and valleys into white light, spreading over all the earth the tokens of great Sol's appearing. As nature is universal and impartial, so she distributes the signs of human faculties not in one part of the body alone, but everywhere, in every member of it, as we should know if we fully understood how to trace her working. Then to what a vast field of thought and to what inexhaustible opportunity for observation does this science introduce the student! And as is its magnitude so is its utility, as we hope to demonstrate.

There are six principal conditions of the human body in general, and its features in particular, which claim the attention of the physignomist in endeavouring to read character. One is form; another is colour; then density or quality; size; relative proportion; and action or motion. These are all recognised by the eye. If we close our eyes and depend upon the sense of feeling, we lose the shades and tints which are so important in character-reading. If again the physiognomist has an opportunity of hearing the voice of his subject, he gains another avenue by which to pry into his character. The tone of the voice is highly indicative of the inward man; as the deep thunder of the lion's roar proclaims his strength and courage, while the squeal of the rabbit betrays a feeble body and timid disposition. The words employed and the manner of expression, the form of the sentences, and their connection one with another, are pretty sure indications of the amount of education the individual has received, and the kind of society in which he has chiefly mingled.

Glance we at some of the conditions we have named, and what we infer from observing them. And first of *Form*. The form of the entire man is the most certain of all outward manifestations of character; because it is the outgrowth of every influence that ever affected that form. In this we can trace his ancestry, the soil on which, and the climate where he has lived, the kind of food he has eaten, and the exercise he has used. Each feature of the man has its peculiar shape as well as the whole person, and in each feature there are more or less distinct traces of resemblance to the whole, rendering it an index to the entire man. If but one finger is bony, the hand will be bony, and so will be the whole structure. When the nose is large in its upper part and fatty, the person will be found large and obese in the upper portion of his body. The ear being large in the lower part denotes an individual with large feet and lower extremities. A relatively large top to the ear bespeaks a large head and relatively smaller extremities below.

Colour is another important guide to character. The colour of the skin indicates its thickness, fair people having thin skins, while dark-complexioned persons possess a thick integument. When the skin is thick it effectually covers the nerves of sensation, and persons so constituted do not feel so acutely as the white-skinned, because of this occlusion of the nerves. I have performed surgical operations on many negroes, and they seemed not to feel nearly so acutely as people of the white race. When cutting a tumour from a black man's arm, at Urbana, in Ohio, several years ago, I asked him if it hurt him much. "No, golly, massa doctor," he replied, "I wish I had anudder one to cut; him feels just like cutting cold pork rind, dar."

Most dark coloured animals have thick skins, as the rhinoceros, the elephant, the alligator, crocodile, hippopotamus. On the other hand, we usually find thin skins on quadrupeds of light or various colour, as the sheep, deer, horse, ox, goat, giraffe, tiger, lion, leopard. Colour is the most trustworthy indication of the climate in which a man's ancestors, if not the man himself, had origin. It is a well known fact that warm regions produce dark races of men, while cooler countries give birth to fairer people, where those of different nationalities intermarry. When, therefore, you meet a man with black hair and eyes, rest assured that some, if not all of his forefathers came from a warm climate. On the other hand, when you see an individual with light hair and blue eyes, it is certain that his ancestors were of mixed nationality, and lived under moderate sunbeams. Take it for a rule that people of unmixed blood and from beneath a burning sun exhibit the dark colour in hair, skin, and eyes; and *vice versa*, mixed blood, cool locality, fair complexion, and blue eyes go together.

The people of North Wales are fairer generally than those in the southern counties; and the same holds good throughout Great Britain, Ireland, and the United States, in all of which the present population has sprung from mingled nationalities.

Size is an unfailing guide to character-reading, especially when we take it relatively, comparing one member of a species with others of the same kind. As certainly as a large bar of iron is stronger than a small one, so surely is a large man more powerful than a diminutive one, if he is equally fine and dense in his material. We could not expect to find as much strength in a poplar stick as in one of elm of the same dimensions, because the poplar is soft and coarse in its fibre, while the elm is fine and compact. It is often the case that a man of a hundred and twenty or forty pounds weight can accomplish as much in any sphere of labour as one who weighs two hundred pounds; because the former is like oak, while the latter is as basswood in his fibre.

Activity is an unerring indicator of the quality of every living and moving thing. Rapidity of motion denotes intensity of life, and a firm knitting together of the whole structure. The pumpkin vine lies still upon the ground, and its tenderness and weakness appear in remarkable contrast when compared with the swaying twigs of the elm or willow. The very fact of motion tends to crowd together the particles on the side towards which the twig is bent, while the absence of movement leaves the fibres loose and uncompacted. Motion or activity is thus seen to be both the cause and the consequence of intensity in vegetable life, and it is the same in the higher kinds. The man who is always in motion is likely to become firmly knit together, and is thus not only capable of performing much useful labour without serious fatigue, but is fitted to resist the encroachments of disease; while he that seldom moves is liable to become soft and weak like an oyster, prepared neither for labour nor endurance.

Glance we now at some particular features of the human body, and how they indicate character. Wherever we perceive thickness in the lips, it bespeaks good muscular development, and abundance of juices throughout the entire system. This make accompanies all who are great lovers of children, and the principle may be thus explained. The juices of nature, whether animal or vegetable, are the grand requisites for propagation and growth. The showers of heaven must descend and water the earth before it can become prolific in herb, and flower, and fruit. If the ground is dry, parched, and shrunken, its productive powers are diminished, if not completely destroyed, and there appears at best a poor and scanty vegetation. So is it in the human constitution. When the period of abundant juices comes on, then is the time of productive and generative power. Then, as nature never brings anything into life without suitable provision for it, that it may be nourished and cared for, so she rarely bestows on an animal the power of generation without implanting such love of the offspring as shall prove sufficient to secure its maintenance. The two are thus inseparable in the wise economy of nature, and therefore we must look for their signs together, and we shall find accompanying signs everywhere corresponding with accompanying powers and dispositions. As the juices are the main requisites for the production of animal and vegetable life, the swelling of those parts in which the juices most appear will stand as evidence of what we technically call Philonepionality, or love of children. Full veins in the back of the hands, thick lips, moist and full eyes, indicate abundance of life-juice. Wherever the lips are full, the walls or coatings of the stomach are found to be thick, giving that strength of digestion which is necessary to produce

the life-juices. The eyes are assistants in this business by looking after the necessary food, as the mouth becomes an auxiliary by taking it in. The same signs that indicate love of children may be taken to evince a love of kissing and being kissed: nature has provided this disposition as the forerunner of the other, preparing for the fondling which doubtless is essential to the nurture of every infant.

Great compression of the lips denotes much decision of character. One lip protruding much beyond the other, betrays a want of balance in the physical powers. If the upper lip is the projecting one, we may expect to find much severity of temper; perhaps slow to rouse, but dreadful in anger when it is excited. There is, indeed, more character evinced in the lips than is generally awarded to them, and less sensuality. It is a generally received, but erroneous idea, that full lips are sure manifestations of sensual character. No; they are nature's testimony to a social, communicative temper, full, especially, of parental affection. The ancient Romans were, as a nation, thin-lipped, and they were remarkably deficient in domestic affection. The sacrifice of the sons of Brutus doubtless was due to this defect in Roman character. The more general sternness and cruelty of the national temper were shown in such amusements as the gladiatorial exhibitions. Cæsar brought out three hundred and twenty pair of combatants, at one time, to fight in presence of thousands of brutal human beings, who, of course, highly relished the barbarous scene. Vitellius likewise promoted such combats in the streets of Rome. Claudius exhibited nineteen thousand malefactors and gladiators, on one occasion, before a Roman crowd, testifying their approbation by shrieking and shouting with joy. Such scenes could never have been tolerated except in communities where all the warmer affections of human nature were stifled, if not wholly stamped out. The prisoners taken at the conquest of Carthage were torn by wild beasts, according to the orders of Scipio; and thousands of similar instances could be adduced to show the absence of everything one calls humanity. The frequent occurrence, among the ancient Romans, of father rising against son, or brother conspiring to murder brother, is sufficient evidence that they were destitute of family affection; yet their amours and debaucheries go to prove that they were not wanting in animal passion. Many of the laws and customs of modern Rome betray the utter absence of domestic affection. The Inquisition had its origin in this great national defect; for no people, with that ordinary good-feeling which has its origin in the family circle, would ever have invented such tortures. As an instance, among modern Romans, of this defective Philonepionality, or love of children, it is recorded that a mother

stabbed her infant to the heart to prevent its cries from betraying the concealment of its father.

We find the same peculiarity attending thin lips among the lower animals. The hog kind are thin-lipped, and show little fondness for their young; which, indeed, they have been often known to devour. The goat is an animal characterised by thin lips, protruding eyes, strong sexual propensities, and little parental regard. Let it be borne in mind, therefore, that animal passion is not denoted by either the thickness or thinness of the lips; but the latter quality betrays the absence of family affection and love of the young in general.

Another remark in connection with the mouth as the beginning of the alimentary canal, and indicating by its thick walls and energetic movements the size, strength, and activity of the stomach. No very small-mouthed person was ever very great in anything. For a man to attain pre-eminence, he requires unusual energy, which demands a large nose to admit a sufficient quantity of air; capacious lungs to receive it and fan the flames of life; but no less a capacious mouth to take in food rapidly, and in ample quantities, to sustain the whole, and continually supply the waste occasioned by this energetic working of the system. Hence he who nibbles at his food like a rabbit, may be expected to display little more than a rabbit's force of character. Colburn's New Monthly says of Dr. Samuel Johnson that, "he did not eat, he gorged. He could devour at a sitting as much as would nourish two whales." The whole circle of biographical literature scarcely exhibits an individual of stronger character than this gormandiser. He left his mark everywhere during life, and his influence is felt to this day throughout the civilised world. Whoever eats with avidity like a tiger, will never want force in some direction, either for good or evil. His morality will depend largely on his education, for morals are altogether a matter of custom; that is, one thing is held to be right, and another wrong in society, not according to any well-founded principles, but according to the conventional usages of each age and country. Moral education acts upon the animal part of a man's nature much as a break upon a train of cars, restraining that which society has agreed to pronounce vicious and reprehensible.

Intellectual culture serves to diminish the size of the lower part of the face, where some of the baser desires manifest their presence. Great width at the angles of the lower jaw indicates contrativeness, and is conspicuous in the hog. The heft and length of the under jaw is indicative of a man's persistenacity, or disposition to hold on or to persevere in one line of action or design; as the jaw is that by which one seizes an object and

holds fast to it through every difficulty; and long jaws are more capable of thus working than short ones. The under jaw is the active and seizing one; the upper is comparatively passive and stationary. The jaws of the tiger are wide; those of the sheep are narrow; and their animal instincts correspond to this proportion.

A wide mouth marks the natural predominance of abdominal structure throughout, with a tendency to over-eating. But if the cheeks are somewhat sunken opposite the double teeth of a large mouth, it is an unmistakable sign that the naturally great abdominal tendency has been repressed by study, business, sickness, or some other cause. Such persons are living evidences of the possibility of overcoming the ascendancy of one kind of structure or form of body, and successfully cultivating another, so as to produce an entire change of character.

Dimples in the chin and cheeks are significant of large associativeness, and the desire to love and be loved. Great natural ruddiness is by some, but falsely, regarded as vulgar; but a certain degree of colour is deemed so beautifying that many pale-faced females resort to artificial colouring. Many years ago, a chemist in a large manufacturing town of Scotland, used to serve rouge on the Saturday evenings to numbers of girls who had lost the natural roses of their cheeks through close confinement in heated rooms. They always asked for it as "a penny-worth of *yon*," never naming the article. Rosy cheeks on a female are very attractive to the male sex; like ripe, red apples in harvest, they tempt one to taste how sweet they are.

The eyes are more susceptible of almost every kind of influence than any other portion of the face. Especially they are affected by everything that either heats or chills the system. Grief, particularly that which arises from the loss of friends, depresses the spirits, and this tends to chill the whole organisation, causing tears to rush from the eyes, in the same way as would happen from exposure to frost or cold wind, but more suddenly. Much indulgence in heating and intoxicating liquors has a tendency to redden the eyes, gorging them with blood, and producing chronic inflammation, which gives a swollen appearance to the under eyelids. Ardent love, and a preponderance of animal passion will heat the system, draw the fluids of the body towards the eyes, enlarging the balls, muscles, and all the neighbouring parts. This enlargement thrusts the eyes forward, causing them to assume a more prominent position, and stand out saliently with relation to the other features. Full eyes, therefore, are evidence of an inordinate passion for the opposite sex. When the animal propensities decline, as they do in old age, the eyes settle back in their sockets; the juices become less

abundant; the whole system cools down, and the eyes are the first features that evince the fact to common observation.

A vacant stare in the eye denotes stupidity, as in the Indian savage. Sparkling eyes bespeak ready intellect and constitutional vigour. Sunken eyes, being opposite in form to protrusive ones, indicate an opposite disposition—free from the dominion of animal passion. Great width between the eyeballs bears witness that the faculty of curvativeness is large, and the person has considerable faculty in judging and remembering curved lines, the turnings of roads, drawings, faces, landscape scenery, courses of rivers, &c., because individuals constructed on the round or curved plan are naturally the best judges of that which is most like their own constitution. A steady fixedness of eye always accompanies large consecutiveness, and the disposition to be thorough in every attainment; whereas the unsteady eye that turns rapidly from one object to another, bespeaks the love of variety, great changeableness—the characteristics of one who scatters his forces, traverses wide fields of thought, but attains perfection in nothing—never works out one of his many half-formed plans and purposes.

Intense thought and superior power of application are never found accompanied by great elevation of the eyebrows, and *vice versa.* Long arching eyebrows are evidence of good mental capacity, if the mind has been wisely directed to the proper exercise of its powers.

The wrinkles which appear more or less on every forehead would of themselves be sufficient matter for an entire lecture. Long wrinkles accompany a predominance of the brain and nerve form, or that structure in which brain and nerve are much developed in comparison with bone, muscle, thorax, or abdomen. Persons of this make are fully described in the work entitled "Nature's Revelations of Character;" yet let me here briefly remark that they are fastidious, attentive to every detail, crossing every *t* and dotting every *i*, so that they are liable to wear out rather than to rust away.

Short, broken wrinkles accompany the form in which the abdominal predominates; and individuals so constructed are apt to love eating, and drinking, and sleeping. They are impatient of personal restraint, and incline to selfishness and indolence. The wrinkles of every man's forehead are true records of the experiences of his life. A child exhibits a smooth, unwrinkled brow, because he has not yet entered on the battle of life. His childish griefs are but for a moment; his duties are light and demand little forethought; his obligations are few, and scarcely cost him a moment's anxiety. But as years advance, and cares multiply, and duties increase, and temptations assail, and

sorrows multiply, each and every one of these leaves its mark on the once unfurrowed brow. Steady and regular lives leave well-defined and well-arranged wrinkles, whether straight or curved. Those experiences that do not sorely try the spirit engrave lines of corresponding shallowness; whereas those trials that harrow up the soul leave their deep furrows on every facial lineament. The long deep lines that lay across Seneca's forehead were the result of his great mental application, his close and continuous thinking, with the sore troubles that spread over the long years of his earnest life.

Faces in which some parts stand out considerably, and others settle deeply into a back ground, accompany well-marked characters—persons who step out of the ordinary lines of thought, and dare to be independent; whereas smooth, even faces manifestly denote those who run in the ruts and grooves of society; who shun earnest truth and duty, seeking smooth paths for themselves often at the expense of uprightness. The man of well-marked feature—he whom once seen you recognise again among hundreds—is a man of original and probably well-disciplined mind. But the round, flat, smooth face, with snub nose and full cheeks, little different from all other faces of the similar mould, belongs to one whose mind runs smoothly over the surface of things, whose mental way-markings are not enduring, whose conversation leaves no more lasting impression on your mind than his features have done. Think of the men whose characters have influenced you; to whom, as oracles, you recur in thought, and wonder what would be their opinion or their conduct in this case or that; and say, were they not men of well-marked, if not even rough features, such as you could never forget, such as would elicit your attention in the densest crowd. Wide, round faces are generally attendants of selfish dispositions. Look for a long, narrow phiz if you are in search of a heart that is pitiful, philanthropic, kind, and humane. Whenever the face is much thinner than the body, it denotes that the mental powers have of late been more exercised than the physical, and *vice versa*.

The facial features, as has been remarked, being the most flexible parts of the body, and most easily affected by mental emotions, are the most obvious indexes to character, and the least difficult to read. But all the habitual movements of the person—the walk, the laugh—give evidence of the individual's character, and are fully treated in my new work, entitled "Nature's Revelations of Character."

Some peculiar mental or moral characteristics attach to whole nations in a general way, and as distinctly there are certain prevailing characteristics in their outward mien distinguishing

them as of such or such a nation—not perhaps marking every individual unerringly, but producing such a stamp that an assemblage of individuals of one nation will readily be pronounced different from a similar assemblage of another. The English are enterprising and self-reliant; the Scotch frugal, saving, firm, and religious, or at least strongly Sabbatarian; the Irish social, witty, excitable; the Welsh industrious, patriotic, and economical; the French affable, showy, and fickle; the Prussians scientific and metaphysical; the Italians, again, have been famous for music, painting, and sculpture; the Russians have strong local habits and attachments, so have the Greenlanders; the Mahommedan of India is superstitious, cowardly, and a vegetarian; the African negro indolent and musical, with strong parental affection; the Chinaman is imitative and mechanical; the American Indian dirty, treacherous, and revengeful; the Yankee enterprising, industrious, blunt, and inquisitive.

To study the English character well, you must see it in London; to study the Scotch to the best advantage, go to Edinburgh; Dublin furnishes the genuine Irishman; and Paris is the place to understand the French character. So the Prussians are most thoroughly national at Berlin; the Russians at Moscow; the Austrians at Vienna; the Italians at Florence, Rome, or Naples; but a Yankee is the same all over Yankeedom: his face distinct from the national type of his European ancestors, his person recognised wherever he goes, and perhaps better known than any other—because he travels the most.

There has been something in the history of every people that tended to stamp them while yet they were new to the soil on which they settled. The Scotch might be rendered cautious and distrustful, by the necessity they were under of guarding against the encroachments of their southern neighbours; the English naturally became mercantile through their insular position, and their early relations with sunnier regions, and a more polished people, stimulating them to seek the necessaries of a higher civilisation. Negroes, and other inhabitants of sultry climes, are indolent, because the heat relaxes the system, and the abundant productions of the earth render industry comparatively unnecessary; yet the Chinaman is a hard worker; it is because the population of his country has become so great in proportion to the area of land for food, that he must work or starve. The Yankee people became enterprising, because they found themselves on the face of a vast region, where no series of generations had subjugated the soil, or built up institutions, or established law, government, religion, education. They had everything to do for themselves, and quickly, or else sink into a life of savagery. It was "nothing venture nothing have," in every

attempt to form communities blest with the institutions of civilisation. But these ventures succeeded marvellously, and the Yankee continues to be venturous.

How wide is the field thus open to the student of Physiognomy! But let the beginner take the easiest studies first. He will find them among the lower animals, which have no deceptive power to conceal their inbred tendencies, and no foolish fashions to veil or deform their physical structure. Let the student, therefore, look according to physiognomical rules, for the outward signs of those dispositions which are held to be characteristic of each species. For instance—Patience in the ox, obstinacy in the jack-ass, destructiveness in the tiger, cunning in the fox, mimicry in the ape, selfishness in the hog, courage in the lion, excitability in the deer, vengefulness in the elephant, mechanical skill in the beaver, pride in the horse, perseverance in the bull-dog, fidelity in the dog, treachery in the cat, craftiness in the oppossum, servility in the camel, timidity in the hare and rabbit, untamable wildness in the zebra, indolence in the sloth, gregariousness in the sheep, activity in the gazelle, the faculty of signalling in the wolf.

Among birds look for the outward signs of inquisitiveness in the crow kind, self-confidence in the owl, conjugal affection in the dove, local attachment in the swallow, which always returns to its nest; and on the contrary an easy transitional temper in the canary, which will breed in a cage, the generative capacity evinced in the common hen, the lofty aspirations of the towering eagle. Here are plenty of easy studies, and no less interesting than easy.

If it is asked, "To what purpose shall we study these varieties of face and form?" We answer the question by another, To what purpose did the Creator form such endless variety? Doubtless one end was to secure the identification of individuals. We can scarcely conceive what confusion, what frustration, both of justice and mercy, what complete disorganisation of society would result if it were not for that variety which makes it easy, at least to all familiars, to distinguish one face or one voice from every other. But another important end is, that the inward nature may in some measure appear by outward signs. Fain would the wicked conceal their wickedness; but to a certain extent it manifests itself even to the most casual observer, who instinctively shrinks, he knows not why, from one man as bad, and draws to another as good; mistrusts one as false, and confides in another as true and faithful. It is our own fault, the fault of our ignorance and neglect of study, that we recognise only the more strongly marked faces, and cannot tell why this man seems intellectual and the other a dunce; this man

worthy of confidence, and the other not to be trusted. The physiognomist detects all the workings of the inward nature, knowing the chisellings which each prevailing thought, or feeling, or practice, has left on the physical structure. The Scriptures, in many passages, recognise this correspondence. "Cain was very wroth, and his countenance fell." (Gen. iv. 5.) "Why is thy countenance sad, seeing thou art not sick?" (Neh. ii. 2.) "Hannah, her countenance was no more sad." (1 Sam. i. 18.) "Wherefore are your faces evil to-day?" (Gen. xi. 7.) In these we have depression of mind recognised in the face. Other passages denote pride and boldness. "A high look and a proud heart." (Prov. xxi. 4.) "They have made their faces harder than a rock." (Isa. v. 8.) "The show of their countenance doth witness against them." (Isa. iii. 3.) "Naaman was a man lifted up in countenance." (2 Kings v. 1.) "I made thy face strong against their faces." (Ezek. iii. 8.) "They are hard of face and stiff-hearted." (Ezek. ii. 4.) "A wicked man hardeneth his face." (Prov. xxi. 19.) On the other hand, there is the assurance arising from innocence. "Then shalt thou lift up thy face without spot." (Job xi. 15.) Anger is easily recognised. "My fury shall come up in my face." (Ezek. xxxviii. 18.) "So doth the angry countenance the biting tongue." (Prov. xxv. 23.) On the other hand approbation. "Lord, lift thou up the light of thy countenance upon us." (Ps. iv. 6.) "Show us the light of thy countenance, and we shall be whole." (Ps. lxxx. 3.) Then cheerfulness. "A merry heart maketh a cheerful countenance." (Prov. xv. 13.) On the contrary, shame and conscious guilt. "Shame shall be on their faces." (Ezek. vii. 18.) "To us belong shame and confusion of face." (Ezek. ix. 7.) "Provoke to the confusion of their own faces." (Isa. vii. 19.) Glory is often said to appear in the countenance, as in Rev. i. 16., 2 Cor. iii. 7., 1 Cor. iv. 6., Matt. xxviii. 3. And we are told that "iron sharpeneth iron, so a man sharpeneth the countenance of a friend." (Prov. xx. 17.) And "as in water face answereth to face, so the heart of man to man." (Prov. xxvii. 19.)

Let it not be said that the science of Physiognomy tends to materialism or fatalism. We hold that it is the mind which makes the body thus and thus, rather than the body the mind. And if there is a re-action, as doubtless there is, it is no more than what we all admit when we say, a man has practised such a vice or virtue that now it has become habit; he does it without an express act of his will; nay, can scarcely help doing it. Whoever admits that one man is born with a propensity to this vice, and another to that, allows as much materialism and fatalism into his creed as the physiognomist who holds that the

tendencies of his nature appear in his bodily structure. But, says every wise observer of human nature, these propensities need not necessarily produce vicious actions. A man may control and modify all that is naturally evil in his inbred propensities. In early life, especially, the good may be cultivated, the bad repressed; and herein our science may afford valuable assistance to the man himself who would improve his own nature, but especially to the educator of youth, who thus discerns without loss of time in making the acquaintance of his pupil, what are his moral and intellectual endowments or deficiencies, and can adapt his training accordingly.

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BEAUTY.

A LECTURE

BY J. SIMMS, M.D.,

Author of "A System of Physiognomy," "Nature's Revelations of Character," &c.

In its narrowest definition, beauty is that property in an object which causes it, when presented to the eye, to affect the mind with emotions of pleasure. It is in this sense that we speak of a beautiful horse, a beautiful landscape, or of that most beautiful of all beautiful objects, a beautiful woman. It is in this sense also that we speak of beautiful movements, which, like exquisite forms and colours, appeal to the mind through the sense of vision. Thus the movement of birds, circling in a sunset sky, is beautiful, and so also is the step of the waves as they run to kiss the shore, and the curtsying of tall grasses as they bow to the passing wind.

But it is not only to these visible properties in objects which excite pleasurable emotions that the term beautiful is applied. Every sense has its own æsthetic domain. Thus the odour of the

rose is beautiful to the olfactory nerve; the softness of thick piled velvet is beautiful to the touch; the flavour of sweet viands is beautiful to the taste; and the harmonies of delicious music are beautiful to the ear. Nay, more; the empire of beauty extends not only over all the senses, but beyond them all. We are touched by the poetic beauty of a tender or fanciful sentiment; by the moral beauty of a generous action; by the logical beauty of a finished argument, perfect in all its parts and sure in its conclusion; by the spiritual beauty of an exalted human soul; and above all, by the eternal beauty that resides in God.

The province of beauty being thus extensive and diversified, it has become the difficult aim of philosophers to find some general property inherent in everything which excites emotions of æsthetic pleasure, and which constitutes the essence of the beautiful. Various indeed have been the conclusions reached by those who have sought to discover this universal æsthetic principle—this unvarying *soul* in all the variety of beautiful things. The school of Alexandria maintained that that alone is beautiful which satisfies the moral nature; while another school, with Boethius as one of its exponents, held that the satisfaction of the intellect constitutes the essence of the beautiful. Sir Joshua Reynolds maintained that beauty consists in mediocrity—in the avoidance of extremes; and the great Edmund Burke advanced the theory, in his celebrated Essay upon the Sublime and Beautiful, that that is beautiful only which produces a relaxation of the nervous system. According to this author, anything which contracts the tissues of the body produces emotions analogous to fright or anger, while anything which agreeably relaxes the same, gratifies the æsthetic sense. Alison and Diderot both denied that there is such a thing as *inherent* beauty, the former maintaining that the beauty of things is a matter of the emotions which they chance to awaken in the individual heart; and the latter, that it is a matter of the relations which they chance to suggest to the individual mind. According to Diderot the more numerous and profound the relations which anything is perceived to possess, the more beautiful it will appear.

But of all the different ideas that have been advanced upon this vexed theme, I am best satisfied with the theory which was held in common by Aristotle and St. Augustine, and which made the essence of beauty to consist in unity, that is, in the perfect and symmetrical adaptation of all the parts to the whole. In other words,—these great philosophers hold that that thing is beautiful whose central principle and organic relations can be embraced in a single view. The justness of this theory, as applied to those descriptions of beauty which appeal to the eye, is for the most part sufficiently apparent. Evidently the beauty of any form consists in the harmonious relation or proportion of all its parts, which is but another way of expressing its essential unity. The beauty of motion in like manner depends upon the accuracy with

which the moving object preserves its centre of gravity or balance—said balance being at any given moment fixed at a *single* point. The more frequently the object changes its centre of gravity or point of balance, without, in any of its transitions, losing its poise, the greater will be the impression of its gracefulness.

In the domain of art, it is always the aim of the artist to bring out in his creation some central idea, or at least to give prominence to some central figure to which all the details of the work will be harmoniously accessory. So deeply do artists feel the necessity of this central thought, that they often omit from their works certain incidents required by strict fidelity to nature, because they might divert the beholder from the main design. Thus in the famous antique group of Niobe and her children, the wretched mother is represented as young, and freshly beautiful, although in real life she could not, as the parent of twelve children, be either. But the lines of age in that noble face would have obscured the suggestion of the main idea, which was simply the representation of ideal motherhood—its love and its anguish. Again, in the Laocoon the countenance of the priest preserves a certain stern and noble dignity notwithstanding the swollen and writhing muscles of his majestic frame indicate the fiercest physical anguish. The sculptor has, in this instance, preserved the face from violent distortion, because such disfigurement—though true to nature—would obscure the leading artistic thought, which is the representation of the power of the human mind to rise superior to the pain which agonizes the body.

This theory that unity is the true æsthetic principle, is still further supported by its applicability to many, at least, of the different departments of supersensuous beauty. Take, for instance, the department of logic. The student of Plato, as he laboriously follows the strong yet supremely subtle dialectic of the "divine" philosopher, is impressed, as he reaches the conclusion, by the exquisite beauty of the argument. And why does the argument strike him as beautiful? Because he sees, at the last, in a single view, the perfect adaptation of all the different parts of the reasoning to the central idea—the thing to be proved. And as he observes how the various lines of thought converge to a single logical point; as he recognizes the magnificent unity of the argument, he is overwhelmed with a sense of its beauty. In other words, the perception of logical beauty has its source in the recognition of logical unity. The fact that the beauty of an object grows upon us with the knowledge of its utility furnishes another illustration of the hypothesis that beauty consists in unity. For instance: to the uninstructed eye, a steam engine has little or no beauty, but to the skilled machinist who understands the special function of the several parts—the pipes, the cylinder, the valves, the piston, the boiler, and the condenser, and who knows how all these parts with their several functions subserve one great mechanic purpose—to such a man the steam engine is highly

beautiful, because the design of the structure gives both ideal and practical unity to all its complexities. In like manner the physiologist finds a delightful study in the digestive system of the human subject, which is, to him, (understanding as he does the one final purpose of all its parts,) an exquisitely beautiful vital machine.

Without further multiplying illustrations, I have said enough to show that this theory, that unity is the true æsthetic principle, is very strongly supported. There are, however, some objections to it which—though I have not time to specify them here, have prevented me from giving it my unqualified assent. Indeed, it may well be questioned whether the efforts of philosophers to find some universal æsthetic principle are not necessarily abortive. After long and close study of this subject, I am inclined to think that there is a beauty which is inherent in objects, and which may be called universal objective beauty, and a beauty which depends upon the peculiar taste of the individual mind, and which may therefore be called individual subjective beauty, and that the efficient cause of neither objective nor subjective beauty can be reduced to any single principle.

Philosophers have differed not more in their views respecting the true æsthetic principle, than in their modes of distinguishing the beautiful and the sublime. Most of them have agreed in esteeming the sublime a thing altogether apart from the beautiful, although they have differed as to the particular qualities by which the two are properly to be discriminated. My own idea is that the sublime is strictly a department of the beautiful, that those beautiful things are sublime whose beauty is marked by power or immensity, and that nothing is sublime which is not beautiful. Burke maintains that "ugliness is consistent with an idea of the sublime," if the ugliness be "united with such qualities as excite a strong terror." But it can be made conspicuously apparent that terror is so far from being an essential element of the sublime that it is, when experienced in any marked degree, absolutely incompatible with sublimity. Take for instance a thunderstorm, which is a spectacle admitted to be both sublime and terrible. But it is not those who are sensible to its terror who appreciate its sublimity. On the contrary the terror-stricken person flies to cellar or some such place for security, while "from peak to peak, the rattling clouds among, leaps the live thunder." All the magnificient pageant of the warring elements—the beauty of the forked lightning, the superbly billowing clouds, the pathetic writhings of the trees as they quiver and crouch and toss beneath the buffets of the storm; the peals, the rolls, the reverberating signals from every peak in heaven,—all these are lost upon the observer who is victimized by fear. His terror is so far from adding to his sense of the sublimity of the scene, that it completely blinds him to that magnificence of beauty with which it is so replete, and in which the true sublime consists. If further illustration were needed to prove that terror is not (as has been so often averred) an element

of sublimity, I could point to the fact that no objects of vision are more sublime than a starry sky, or a lofty mountain, and yet these spectacles are observed without the slightest sense of fear, for no one, while enjoying the sublime emotions which they arouse, is expecting the sky to fall, or the mountain to erupt. If the observer were anticipating such a consummation—if, for instance, while he stood with upturned face, he were expecting a terrible meteor to fall on his head, or if the mountain were a volcano from which he momently expected a terrible emission of molten lava, the extreme probabilities are that he would instantly fly from these sublime scenes with blanched cheeks and with erect hair that whitened as he fled. My idea, in brief, is this—that while the grandly beautiful, or in other words the sublime, is in some cases associated with danger, which is in its nature productive of fear, yet it is never when this danger is realized, and this fear consequently experienced, that the sublimity of any spectacle is appreciated.

It is the aim of art not simply to imitate the beauty of nature, but to rival it. But here the question may be asked, How can art in any true sense *rival* natural beauty, when it is necessarily confined to the reproduction of the beauty already revealed by nature herself? It is true, as alleged in this query, that all the beauty to be found in works of art is revealed in nature, but it is often revealed there only to the artistic eye. As a rule, the finest, the most distinctive beauty of this or that natural object is more or less obscured to the common mind by its accidental surroundings. For instance, we see a beautiful landscape beneath a leaden sky which robs it of half its peculiar loveliness, or we see a person with a beautiful expression of countenance which yet we cannot fully appreciate, because it is accompanied with some striking disfigurement of feature or complexion. Now the artist's eye detects the half-obscured beauty in nature, and reproduces it, severed from everything that can interfere with, or is unessential to its noblest and most effective manifestation. This is what is called idealization in art—an idealization which, by putting the natural beauty in its strongest light, helps to *reveal* it to the unartistic masses. This idealization of nature is the highest aim of art; no art can successfully pass beyond it into the regions of pure ideality. The modern or romantic school of painting, under the influence of Christianity, aims to express the infinite, but it fails in this effort, or succeeds only so far as the infinite is dimly shadowed forth in the human consciousness. For instance, the celebrated head of Christ, by Leonardo di Vinci, does not represent divinity—as intended—but only the divine in man. Art, even in the romantic school, never reaches beyond the idealization of *human* nature. This idealization is the soul of the religious art of the Greeks. They took any attribute or idea inwoven with the character or life of our race; they conceived of it severed from all the accidental degradations of its natural surroundings, and

they embodied it in marble statuary instinct with truth and life. Here the *art* was complete, nor could its success be degraded by the errors of a false religion which miscalled its creation by the name of a god. A figure so potent and awful that it might seem to wield the thunderbolts, does not the less present the majestic aspect of our nature because it comes down to us as a Teus. Tender and spiritual womanhood is expressed in the figures of Psyche; and in the rugged image of Hephastos the artist has caused the false god to convey an eternal truth—giving him arms mighty and skilful, with feet lame and deformed, that so he might bear down to the ages the great lesson of natural compensations. Even the drunkenness of the Satyrs is in strict accordance with the poetic conception of those wanton beings designed to link the brute with the psychic world. Self-command is the attribute of reason; but in goat-footed creatures with pointed ears, we look for nothing but gamboling, restlessness, and license. You have some of you, perhaps, heard the story of the little beggar girl who, wandering one day into an art gallery, had her attention riveted by an exquisitely beautiful statue of Psyche. Suddenly leaving the gallery, she hastened to the city fountain where she washed her dirty face and hands, and then returned to her former post to renew her rapt contemplation of the statue. In this instance, the art revealed the beauty of feminine purity to the tattered and forlorn little critic, who was inspired by the divine revelation to make an effort toward better living. Doubtless she had seen, many times in life, women spotlessly pure in their raiment and persons, and in their thoughts steadfastly loyal to modesty and honour. But some imperfection in these women, some defect of beauty or intelligence; some harshness of voice, or coldness of manner—had obscured in them the manifestation of that exquisite, tender, womanly goodness which the statue fully revealed.

It is the province of art, as I have said, to reveal beauty; but this beauty is revealed the most successfully to those who have made a speciality of art study. The necessity of studying art in order fully to appreciate its lessons is made fully apparent, when we consider that the value of our judgment with respect to any particular thing, largely depends upon the correctness with which we compare it with other things of its class. Since then comparison is the chief factor in all our judgments, we must, by the necessity of the case, know something of art in general, before we can understand the full significance of any particular art work. It is no disparagement to art, that we must give it this special, and attentive study, in order to appreciate its revelations of beauty. There is very little worth knowing that can be acquired without some exercise of application. Even the love of nature, and the critical appreciation of the fine points in a landscape, like the love and the critical knowledge of art, are to no small extent a matter of education. For this education the mountaineer enjoys

the best opportunities. In the solitary valleys, and on the august heights he learns the finest sympathy with all the changeful moods of nature. In every *canôn* he finds a school of sentiment, and in every assemblage of mountains an university of the fine emotions. So thorough is the training of these silent powers, that even the rudest trappers and miners sometimes find in the scenery around them a passionate enjoyment which an artist might envy, and which gradually becomes an indispensable element in their life. Everywhere nature inspires them with her majestic presence, or soothes them with her tender voice. If they are happy hearted, the gay waterfall that lightly vaults the rocky steep, sings for their solitary hearing her merriest song; and if they are saddened, the sorrowing wind sets in the pine trees, and answers them sigh for sigh. Listening with rapt attention to the voice of nature, they hear her speaking in the tones of God,—the unutterable Presence transfuses soul and sense, and, lost in a happy dream, the slow procession of the hours seems to them but a point of time. This dream, this ecstasy, this divine dilation of soul is more or less the result of the education of the eye to perceive, and of the emotions to realize the manifold beauties of nature.

In following me thus far in this lecture you have been reminded how the wide extended domain of beauty stretches over all the five senses, and beyond them all into supersensuous realms; you have also speculated with me a little upon the nature of true æsthetic principle, and you have seen something of the relation of beauty in art to beauty in nature. I would now direct your attention to the subject of beauty as illustrated in human beings. In this connection, beauty may be divided into that which is physical, intellectual, and spiritual. We are so constituted that as sensuous beings we are delighted with physical beauty; as intellectual beings we are seekers for the beauty of truth; and as spiritual beings we are transported by the beauty of goodness. In the minds of the young and ardent, these latter descriptions of beauty are intimately associated with the first. Hence when such persons are impressed with the physical comeliness of an individual—especially if the individual be of the opposite sex—they are prompt to suppose that the charms which have pleased their eye, are duly supplemented by all the advantages of intellect, and the graces of character. This disposition to link spiritual and mental with physical beauty, is so nearly universal with the young, and so wide-spread among persons of maturer years and experience, that it may be truly said that no letter of introduction—however high its source, or favourable its language—is of more social advantage to the bearer than is a comely physical appearance.

The power of mere personal beauty in exciting the passion of love has been made the subject of frequent and severe animadversion. And yet it might be assumed, upon general principles, that an instinct as profound and wide-spread as that which leads men and women to select as connubial mates those who impress them as

phyically beautiful--it might be assumed, I repeat, that an instinct like this would not be implanted in the human constitution without some wise reason. This reason is found in the fact that beauty of external form is an indication of healthfulness of internal structure, from which it follows that those persons who are physically beautiful are best adapted to that purpose of perpetuating the species, which is the ultimate aim of all love between the sexes. I have not infrequently conversed with individuals who claimed that their affections towards persons of the opposite sex were in no degree affected by considerations of personal beauty. This statement of theirs might seem to be confirmed by facts, since they do undoubtedly become enamoured with persons who would be generally considered ugly. It does not follow, however, that because people are ugly according to the accepted standard of any given community, that they are ugly to every individual in that community. On the contrary, so great are the idiosyncracies of taste, that what the community at large might condemn as ugly, some individual might approve as handsome, and when people say that they love an ugly person, they mean that they love one whom they know would be generally considered ugly, and not that they love one who is considered ugly by themselves. I question very much whether any man or woman ever fell in love with a person who did not possess, for the lover at least, genuine physical charms. It is natural, however, that people should be reluctant to admit that they consider the object of their affections personally attractive, when they know that the opposite opinion would be held by almost everyone else. They know that if they were to tell the truth in the matter, they would expose themselves to ridicule for being so infatuated by love as to be unable to discriminate between beauty and deformity; and hence they adopt the expedient of protesting that what they love is exclusively mental or moral endowments, and that to mere personal loveliness they are wholly indifferent.

By the Greeks, physical beauty was so highly esteemed, that they placed it in the order of their affections next to virtue, and, in the person of Aphrodite, the goddess of beauty, elevated it to an object of worship. The French proverb which runs, "The smiles of a pretty woman are the tears of the purse," is one of th many popular tributes to the all-conquering power of beauty Even the miser becomes liberal when beauty arrays before him her bewitching charms and exacts her tribute. Power abandons the sceptre when beauty demands the sacrifice; and ambition, at her call, forgets to struggle and to conquer.

Since personal charms have so great an influence in awakening the passion of love, it is natural that they should be generally coveted, and especially that they should be coveted by women, in whose life love is the principal element. It may be said without fear of gainsaying, that most, if not all men, and certainly *all* women, desire to be beautiful, and would be willing to make no

small exertion to attain their wishes in this respect. This state of case is not only natural, but right—what is wrong in the matter, is the mistaken if not criminal methods by which many individuals attempt to increase their charms. Yes, I will say without hesitation, criminal methods; for surely that is criminal which disfigures the body, undermines the health, and, by irritating the whole nervous system, acts disastrously upon the serenity of the temper and the vigour of the will. The woman who wears tight corsets, 'grappling them to her soul with hooks of steel,' and who pinches her feet into Chinese boots, does not thereby increase her beauty, but simply creates bodily disfigurements fatal to her health and happpiness; and she who makes use of the hair dyes and cosmetics which are now so generally in vogue, will, (unless she is very fortunate in her selection), ultimately sacrifice her health, her beauty, and perhaps her life, to the slow poisons which most of these preparations contain. The only innocent, and in the end the only efficient modes of increasing the charms of the person, are to live healthfully not only as regards the body but the mind; to preserve the purity of the moral character, and finally, to dress with taste. This dressing with taste, if we may judge from the rarity with which it is done, is almost as difficult as to live the life of a sage or a saint. Women are usually so much the slaves of fashion, that they follow the prevailing mode with little or no regard to intrinsic beauty, or to the special requirements of their own peculiar style. Napoleon III. said of the Princess Metternich that she was a living example to prove that "*beauty is unnecessary!*" This independence, on the part of the Princess, of what is generally ranked as beauty was due, in great measure, to the exquisite taste with which she attired herself. Women who are above the average height should wear low hats and heels, while short women should dress their hair as high as is consistent with grâce; though they should not, even to increase their stature, wear very high heels, since the latter are incompatible with the natural, and therefore healthful poise of the body. Women who are too tall, should eschew very long trains; and short women should, under no circumstances, surround their skirts with rows of flounces, which will have the effect, apparently, to diminish still further their diminutive stature. Whatever may be the fashionable colour, the woman of taste will always wear such tints as are suited to her complexion; and in the ornamentation and arrangement of her dress she will adopt those winding and irregular forms which express ease and grace, while they stimulate the imagination.

But though all the people in the world understood and practised the art of making the most of their personal advantages, and of more or less concealing their personal defects, there would yet be large numbers who would present an irredeemably plain, if not repulsive appearance. There are those who are born hopelessly ugly, but this native ugliness is not without a cause which it is in the

power of parents to remedy or at least to moderate. The practice of throwing upon God the sole responsibility of all the ugly children who are born, is happily disappearing before the light of physiological science. It is the parents of the child, and not the Supreme Being who are to be held chiefly accountable for its incapacities or disfigurement. Among the many circumstances which affect the child are the pleasant surroundings of the expectant mother; the food she eats, the manner in which she wears her clothing, the harmony and love which reign between the parents before, and at the time of conception, and the quality and quantity of life force operative at that time and for months previous. Fits of anger, which are always to be avoided, should be especially shunned by the *enceiente* wife. She should also forbear the use of exciting drinks, such as wine, tea, coffee; and of food of a similar nature, as pepper, pickles, preserves, hot meats, pastries, and, in brief, rich food of every description. She should take plenty of sleep, and at regular hours, and she should exercise moderately in the open air, as well as in-doors. Few things are more injurious to women and their children than the habit of housing themselves during their pregnancy, as though the giving birth to a child according to the divine laws of nature, and in the sanctity of human wedlock, were a thing of which to be ashamed. The expectant mother should avoid tight shoes, tight laces, and rough clothing next the skin, and both parents should at all times maintain cleanliness of person, and purity of conscience. When all these conditions antecedent to the birth of a child receive the attention they merit, then, and only then will the beauty of offspring be lifted out of the sphere of apparent accident into that certainty which always results from the due application of scientific principles. When the child has been vigorously generated, and healthily brought to the birth, it should receive its mother's milk and constant personal attention; but if this should be prevented by the invalidism of the mother or other causes, it should, at least, enjoy her devoted love and solicitous forethought. The most beautiful and healthy children sometimes become ugly and feeble in less than a year after birth, for want of maternal love and attention.

As beauty is one of the principal causes of love, so love is one of the principal causes of beauty. Beautiful children are the offspring of loving parents. Hence those should marry who are deeply and purely in love, and whose mental and physical temperaments are so adapted to each other that their love will be perpetual. No woman ought to be the mother of a child by a man whom she has ceased to love.

Beauty and love have both the round form. The turtle dove has this form in all its parts, and the constancy and devotion of its love have become proverbial. Thus Solomon says, "Behold thou art fair, my love; thou hast dove's eyes." To attain or preserve the round form, people should take abundant sleep, with

moderate exercise when awake.* They should use large quantities of soap and water, and avoid excessive labour, irritation of temper, anxiety and grief. "Grief," says the poet, "is beauty's canker,"—dissipating all the charms of the person as sunrise does the morning dews. In general everything that tends to promote health, tends to promote beauty. Cold water baths, being extremely healthy, are accordingly extremely conducive to beauty. Warm baths, on the contrary, though they give to the skin a temporary glow and transparency, have a relaxing after effect, which produces obesity and languor. A plain diet is equally conducive to health and her twin sister beauty. It was no miracle, but was in strict accordance with the laws of nature, that the four Hebrew youths at the court of Nebuchadnezzar should grow fatter and fairer on their plain diet of pulse and rice, than did those who were sumptuously fed at the king's table.

Beauty is to be found among all classes, and in all countries. It is often seen in a marked degree among the poor, and in the middle ranks of life, but less frequently, perhaps, among the rich. I have seen beautiful persons in every State in the United States, as well as in many of the territories of America; also in England, Scotland, Ireland, Wales, France, Switzerland, Italy, Russia, Sweden, Norway, Lapland, Finland, Denmark, Egypt, Algiers, Morocco, Turkey, Syria, Greece, Austro-Hungary, Germany, Prussia, Belgium, Netherlands or Holland, Spain, Portugal, and other countries to which my travels have extended. But while beauty is to be found in all countries, the standard of beauty varies greatly, according to the tastes of different nations. As a rule men do not admire physical types widely differing from their own. Thus, people of the Circassian stock are not prone to discover beauty among the darker races, such as Indians, Mongolians, and Negroes, and *vice versa*. This rule obtains also among the

* Rules for Preseving Beauty.—All physical beauty depends first and chiefly on the perfect conformation of the body; but perfect health is no less necessary for maintaining it, and for making regular features and a well formed bodily structure appear to advantage. Therefore any lady who desires to preserve a delicately transparent skin with a fine natural bloom, a sparkling eye, and an easy and graceful carriage must rise early, breath pure air; use moderate exercise; bathe frequently; dress in warm garments, carefully avoiding tightness in any part; and especially keeping the feet warm and dry.

The following are the most deadly enemies of physical beauty, and to be carefully guarded against.:—

1. Cathartic medicines, and whatever else occasions profuse perspiration. On the other hand, face powders, and all other quackerics which fill up the pores and obstruct the natural perspiration.
2. Indulgence of the appetite in large eating, especially of rich food.
3. Immoderate exercise or over-work either of body or mind—because the fibres are thus hardened, and an aged look is produced.
4. Cold piercing winds.
5. Loss of sleep.
6. All indulgence of the baleful passions; as envy, hatred, malice, and discontent; likewise grief, fear, and anxiety. To these disfiguring agenst may be added, the practice of making foolish gestures and wry faces.

lower animals; to the frog, for instance—the female frog is far more beautiful than the most beautiful woman. Physical beauty is more common among women than men. Among the great female beauties of the past, history records the names of Athor, the Egyptian Venus; Pasht, the lovely and famous lady of the Speos; Antinia the younger, Jane Shore, Lais, Phryné, Fair Rosamond Clifford, Helen of Troy, Lucretia Borgia, and Irene of Constantinople. But although, as I have said, beauty is most frequently illustrated by the female sex, there have yet been numerous instances of superior beauty among men. One of the seven princes of the Argives was so strikingly beautiful that in the bloodiest engagements his enemies would be so impressed with the splendour of his person as to leave him unharmed. Maximillian I. of Germany could be distinguished among the members of his Court by his dazzling beauty. Alcibiades is said to have been exquisitely beautiful; and Demetrius Poliorcetes was followed about by the populace, eager to feast their eyes on his incomparable loveliness.

But though physical beauty is a great power, and *may* be a great good, it is infinitely inferior to beauty of mind and soul. Lord Bacon has compared it to "summer fruits, easy to corrupt, and which cannot last;" and certainly it has been oftener the cause of demoralization and misfortune to its possessors than of goodness and peace. Mary Queen of Scots was not more celebrated for her beauty than her misfortunes; for having lost her crown, she lived for nineteen years in prison, and was finally beheaded. Helen and Cleopatra both set the world in arms. Paulina, wife of Saturninus, was hurried by her beauty into the commission of great crimes. Lucia, a maid of transcendant loveliness, put out her eyes in order to preserve her chastity; and the wife of Prince Orgiagon, as well as Timoclea of Thebes—both women of extraordinary beauty—committed murder, in revenge for their ravishment. Physical loveliness is so far from implying corresponding perfections of mind and soul, that the presumption is always against the moral and intellectual character of a strikingly beautiful person. This is particularly true of the female sex; for when women are beautiful they have usually little to do but to contemplate and exert their personal charms; whereas men may be diverted from this petty line of thought and action by ambition, study, business, and the many occupations and excitements of their more public and unfettered life. One reason for the moral and intellectual inferiority of beautiful women is found in the fact that when Dame Nature has furnished an abundant supply of physical advantages, she usually gives but a meagre outfit in other and more important particulars. Above the door of the great Minster in Basle is a representation of the wise and foolish virgins, in which the former are all plain, and the latter strikingly handsome. The artist who designed this pediment had evidently studied society to some effect—his leading idea that sense is made a compensation

for ugliness, and that frivolity and beauty go hand in hand, having not a little foundation in fact.

But it is not only true that when nature moulds a beautiful woman she is chiefly concerned with her beauty, and not with her endowment in other respects; it is even more to the purpose that though her native gifts be never so fine, they are peculiarly liable to neglect or vitiation. The woman whose personal loveliness affects the sense like fragrance, and whose

> "Every tone
> Is music's own.
> Like song of morning birds,"

is not likely to care that her words should be wise ones; and they who can win love with a smile, are rarely those who labour to earn love by acts of thoughtful and self-devoted kindness.

To the practised physiognomist, mental and spiritual beauty are clearly expresed in the face, where their presence gives attraction even to the homeliest features; but those unversed in the physiognomic art, depend chiefly upon conversation and actions for their insight into the higher types of beauty. Beauty of mind appeals to the noble sentiments of charity, honesty, respect, hope, reason, faith, and friendship; while beauty of person too often engenders jealousy, envy, hatred and animal desires. The man or woman who condescends to the petty gossip and slander which unfortunately form so large a part of conversation, is spiritually ugly; while they who give a word of kindly commendation, or speak a forceful but unpleasant truth to serve a noble purpose, are beautiful in the highest sense of the word. It is not only trifling and disennobling, but it is positively criminal for any one to say aught to the disadvantage of another, until he positively knows the charge to be deserved; and then he should speak not from motives of malice or from a disposition to entertain his hearers, but with a view to rouse that public indignation or disgust which is oftentimes the most effectual scourge of wrong-doing. It is natural for any fairly generous man to think well of those of whom he has learned no evil, but these instinctively kind opinions are constantly blighted by injudicious or malignant remarks; for there are to be found multitudes of men and women who will ruin the reputation of others with no other motive than the mere pleasure of ruining them. How much more to be admired than such malignant creatures, are those who cultivate the beauty of the mind, by contemplating the manifold charms of nature,—the blue vault studded with starry worlds, which imagination peoples with spiritual beings; the carpet of green adorned with myriad flowers with which the wide fields are covered; the wreaths of snow twining the lofty brow of the mountain; the glistening of the morning dew, the soft loveliness of twilight, the splendour of the rainbow, and the glory of the clouds.

Mental beauty may be cultivated, not only by the study of nature, but of literature and art; and spiritual beauty dawns

upon every soul that is capable of apprehending though never so incompletely, the efficient cause and final end of this great scheme of things; who is capable of seeing, as an English bard has finely expressed it that—

> "All are but parts of one stupendous whole,
> Whose body, nature is, and God the soul."

There are those who entertain the belief, or at least the fear, that the cultivation of the mind is inimical to the growth of the spiritual nature. Such persons confound religion, which is nothing more or less than love to God and man—with the petty, complicated and superstitious dogmas of their own particular sect, and as they have good reason to fear that these latter will suffer by the growth of general intelligence, they decry the cultivation of the intellect as destructive to religion. All religious superstitions must disappear as the enlightenment of the people becomes more profound and general; but on the other hand, there is abundant cause for confident faith, that the growth of popular intelligence will only increase that reverence for the human soul and for Him who made the soul which constitutes the very essence of true religion. The study of all branches of physics has a natural tendency to lift the mind from the comtemplation of nature's laws, to the great Law Giver; and they who become acquainted, through literature, with the mighty and virtuous deeds of the heroes of past ages, are roused thereby to that noble emulation which is the only true form of repentance, and which is the highest expression of spiritual vitality.

Spiritual, or soul beauty, being superior to all others, is the most worthy of cultivation. But as it is, in its nature, extremely subtle, and peculiarly independent of all physical surroundings, it is more difficult of description than either mental or physical beauty. It is adumbrated more or less distinctly in the noble, clear, and tranquil eye of the individual who possesses it; while mental beauty is manifested in the form of the nose, and the lines of expression which lead from that feature. Physical beauty resides chiefly in the permanent form of the body; mental beauty in the more noble parts—in the walk and other movements; and spiritual beauty in the exquisite, but evanescent, expressions of the countenance, and particularly of the eye. This soul beauty, physically manifested in the eye, is the crowning grace of those who use a strong and steadfast will, to effectuate pure and lofty moral purposes. Of all the illustrious dead whom history holds up to fame, none appear so truly—so immortally beautiful as those who have bent all the energies of mind and body, and sacrificed fortune, friends, and life itself, to some great moral reform. There are many circumstances which tend to unfold and make beautiful the human soul, among which none are more richly productive than severe trials, nobly endured. As various tools and different kinds of processes are required to prepare wood, iron, and other raw materials for the manufacture of a fine musical instrument, so

various circumstances, such as troubles which cut into the soul, and pleasures which, as it were, plane or smooth it down—all are required to fit us, like fine instruments, to give forth spiritual harmonies. But though sorrows and temptations are the spiritual tools by which the highest virtues are, as it were, laboriously worked out; yet these tools, like the tools of a mechanic, must be properly controlled, if they are to effectuate any desirable result.

From the many examples of mental beauty, I would select, for citation, the great names of Bacon, Locke, Hume, Berkley, Descartes, Leibnitz, Kant, Cousin, and Compte. Acceptable illustrations of soul beauty are not so easily produced, since those types of spiritual character which are admired as angelic by one class of men, are regarded as Satanic, or at least as ridiculous, by another class. I will, however, venture to suggest, as illustrations of spiritual beauty, the names of Socrates, Plato, Howard, Wilberforce, Fenelon, Channing, Mrs. Mary Washington, Mrs. Mary Somerville, and Mrs. Mary Howitt.

Beauty of person without corresponding mental and spiritual beauty, is like a flowering tree which bears no fruit—it pleases the eye, only to disappoint the hope. And when the hope is disappointed—when the "charms which strike the sight" are unaccompanied by the "merit which wins the soul," then the pleasurable emotions with which a beautiful person is at first regarded are followed by contempt or disgust. On the other hand, the most homely face grows beautiful, when it is the look-out of a beautiful soul. For soul beauty, like a lighthouse on a desolate shore, illuminates all within, while it sheds blessings on all without. Many have been those who, though personally unattractive, have been most beautiful in mind and soul. Such an one was Dr. Jeremy Taylor—a man with salient and even homely features, but with a soul rendered beautiful by charity, by liberal culture, and by wide sympathy with his fellowmen. Hippocrates informs us that Democritus was so indifferent to his personal appearance, that the people of Abdera, among whom he lived, regarded him as an uncouth madman; yet he was a humanitarian and a philosopher, a devoted student of nature, and of the most noble learning of his age. Those smooth, round facial outlines which are so essential to beauty, usually indicate shallow minds, and inexperienced, undisciplined souls. It is almost impossible for any one to preserve such outlines who has lived a laborious life; and idleness is, of itself, sufficient to fill the mind with foolish imaginations which lead to dangerous desires, and too often end in gross and criminal actions.

In concluding this lecture, let me impress upon you this one consideration, that while physical beauty is, as yet, the heritage of few, and while even mental beauty is to a great extent a matter of natural gift, yet spiritual beauty may be attained by all. Yes, all of you who sit before me to-night, may, if you will perseveringly do that which is right (whether you *feel* like it or not), develop a soul as transparently pure as a dew drop, and as staunch as the rocks.

THE SUBJOINED MEMORIAL WAS PRESENTED TO DR. J. SIMMS, AND PRINTED IN THE "DAILY TELEGRAPH" OF LONDON.

LONDON, ENGLAND, November, 1873.

To Dr. J. SIMMS, of New York.

The course of fifteen unique lectures that you have so ably delivered to deeply-interested audiences in London, have created an unusual interest in the study of Physiognomy, as manifested in Man, Animal, and Vegetable Life.

The principles of Physiognomy that you have given during the lectures we believe to be new, philosophical, and correct, and if generally adopted and lived in accordance with, by the people, would promote the most worthy interests of humanity and improve the species.

As a testimonial of our esteem and respect, we cordially invite you to visit London again, at your earliest convenience, and favour us with another course of your instructive and valuable lectures.

GENTLEMEN.

W. G. Smith, Artist for Press
W. W. Newbould, Clergyman
James Kitchen, Esq.
G. A. Beavis, Architect
Mr. S. Mortimer
J. Ashman, Principal of the Psychopathic Institution, 254 Marylebone Road
H. D. Croney, 24 Colville Rd
Thomas Edwards, 98 Gloscester Crescent
Walter H. James, Esq.
John Pierce, Lawyer
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Eleven hundred and seventy-three names of ladies and gentlemen, in various professions and occupations, have been omitted for the want of room.

Philosophia Amoris et Matrimonii;

OR, THE

PHILOSOPHY AND FACTS OF

LOVE AND MARRIAGE,

A LECTURE

BY DR. J. SIMMS,

Author of "Nature's Revelations of Character," "A System of Physiognomy," Several Scientific Lectures, &c.

LOVE, in its most general sense, may be described as a certain attraction between mind and mind, or matter and matter. The manifestations of this power may be thus classified:—

1. Attraction of Material Substances.
2. Sexual Desire.
3. Parental Affection.
4. Filial Affection.
5. Mental Congeniality.
6. Electric and Magnetic Harmony.
7. Spiritual Affinity.

1. The first—which it may seem strange to dignify with the name of love—is common to all matter, even that which, so far as

we know, is incapable of feeling. Two drops of water will move towards each other and unite, if not hindered. If quicksilver is poured on a perfectly level piece of glass, and then divided into small globules, these will presently be seen running together again. All material substances manifest this tendency to compact, which, while it economizes space, increases the power of self-protection.

2. Sexual desire is common to all male and female life, whether animal or vegetable, and has for its object the perpetuation of the species.

3. Parental affection is that instinctive love which secures to the offspring the care and protection needful for the young of all animal organizations. A remarkable example of this affection was Virginius, who slew his daughter to save her from the lust of Appius Claudius.

4. Filial affection is that clinging fondness which in childhood wins and retains the parents' love so much needed. In maturer years it is that grateful regard that goes to repay the parents' care and solicitude.

5. Mental congeniality is found where the intellectual tastes of two or more persons are alike; as where there is a mutual love for literature or science. A striking example of this was in the lady who married M. Roland, not for what we usually call love, but from respect for his intellectual character. The result was an attachment so strong, that when Madame Roland was beheaded, he stabbed himself to death, unable to survive the separation. But if, in a married couple, one has a love for the fine arts, while the other has no tastes above the gains of trade, the tendency of such different predilections will be to draw their affections apart in a manner ruinous to conjugal felicity.

6. Electrical and Magnetic Harmony is of great importance for maintaining a perpetual attraction between husband and wife. Its absence is apt to freeze the finer feelings that belong to the conjugal relation. As long as one of the parties in wedlock is highly magnetic, and the other quite electrical, they are well adapted to each other, so far as these conditions can fit them for married life. The contrary, however, is the case when both are either largely magnetic or highly electric. It is a mistake to suppose, as some half-instructed people do, that electricity and magnetism in the human subject are the same; and the limits of this lecture do not admit of a full explanation of the matter. Suffice it to say that the signs of abundant magnetism in the human constitution are warmth and attractiveness; while the indications of electrical predominance are strength, energy, and courage. Electricity preponderating renders a human being positive; where magnetism dominates, he is negative. A well-known law of these agents is that the positive and negative attract each other; whereas two positives or two negatives are mutually repellant. This law holds good in the human body as in all other forms of matter. How unwise, then, to bind by law in the most intimate relationship a man and woman who, being both either positive or negative, have in their very nature a tendency to become repulsive to each other!

He who thus marries with the hope of a golden sun rising on his nuptial morn and increasing to the perfect day, will find that he has rushed upon a dark night of sorrow and despair. Such marriages are generally contracted either from purely mercenary motives, or for the gratification of sensual appetite; and we know that the wedlock which has no other parentage than animal desire, is likely soon to become an unsheltered orphan.

Men with large bones and a well-developed thorax are usually electrical. Muscular women with large abdominal development generally abound in magnetism. These conditions may be reversed. A woman, having relatively large bones and thorax, may be electrical; and a man, having the muscular and abdominal developments predominating, may generate an abundance of magnetism. Electricity serves to regulate magnetism, and *vice versa;* so that a husband and wife properly adapted in these respects will be healthy and happy if other circumstances are suitable. Electricity is an ever active force pervading all matter, and occasionally becoming highly excited, as it does when equalizing itself by the aid of magnetism in those discharges which we call lightning. Electricity passes round the earth simultaneously in two opposite directions parallel with the equator. This can be very simply demonstrated by bringing the positive and negative poles of a battery near to each other, with a common card between them. When the spark has passed from one pole to the other, it will be found on close examination that the hole made in the card has its edges turned outwards on both sides, proving that the electric discharge passed both ways simultaneously. What is true in the general is also true in the particular; and reason teaches us to look for the same results in the small battery of marriage as in the great battery of the globe on which we live. To produce healthy and happy results from marriage, the battery must be in accordance with the great natural law of positive and negative; then may we look for a harmonious life and fine children. The top end of everything in nature is positive, and the lower is negative. To demonstrate this, hold a bar of iron, two feet long, and about an inch in diameter, in a vertical position, and bring a small compass to the top end of it. The north point of the needle will be attracted; and if the iron bar be then drawn upwards until the lower end is opposite the compass, the needle will be seen to turn, and the south end will stand next to the bar. When this magnetic test is applied to a human being, it is found that his upper portion is positive, and the lower negative. Hence, as we have said, a man with a relatively large calvarium and thorax will find his opposite and remunerative partner in a woman with the lower face and abdomen large in proportion. The day is rapidly approaching when mankind will study and respect the physical laws of the Creator no less than the moral, having learned that both were equally designed for the happiness of all who obey them.

7. Spiritual Affinity. Before a man and woman enter into the marriage relation, they should be assured that their spiritual natures are developed in nearly the same measure; and that their

religious beliefs will harmonize. Husband and wife should worship at the same altar, be it in a building called a church or in the great temple of nature. A Roman Catholic and a Protestant united in wedlock are in danger of frequent discord, unless blessed with an unusual share of liberality and good sense; because the beliefs round which their higher nature centres are so dissimilar. Protestantism and Roman Catholicism have been at war ever since both have had an existence, and now they are struggling for supremacy in every Christian country. The war is everywhere in thought; in most places has got the length of words; in some is developed in deeds of coercion; but it is to be feared that within a few years it will break out in a sanguinary and dreadful conflict between state and church, or between free and conservative thought. All such agitations have in bygone times terminated in bloodshed. I remember the years when the question of negro slavery in North America created only great mental excitement, and a war of words. But I lived to see the dreadful struggle that settled the question. It seems to me that Lord Derby and Earl Russell have sufficiently apprized the public that they apprehend a war at no distant period, from some unnamed cause. But everyone foresees that religious opinions will be the main element in the strife. Still hoping against my better judgment, I pray that such a war may yet be distant. However, let young lovers be wise, and not marry under circumstances likely to engender more misery in the future than they have ever done in the past.

While on the subject of love, let me say that the eyes are the banners of Cupid. The way in which their form denotes the quality of love one possesses is described in my lecture on Language and Love. The love of a virtuous, modest, intelligent woman is enchanting; and when the charms of beauty are added, she surpasses the brightness of the glittering stars of heaven. Open thine eyes to the tender purity of love; it will shed light on thy pathway, and fit thee to receive the most blessed impressions. Love is the great bond of society; and he who would shed pleasure and honour on the world around him should yield himself to its tenderest ties. Few there be in our days who love so devotedly as did Jacob when he laboured fourteen years for his Rachel; and we do not recommend the passion of Romeo for Juliet, or of Almaviva for Rosina; but rather that constant and devoted affection that Tiberius Gracchus manifested for his wife Cornelia. History records some extraordinary examples of conjugal love, as C. Plautius Numida, a senator of Rome, who, on hearing of the death of his wife, slew himself with his sword; and Portia, who desired to follow her husband whether in war or peace, and refusing to survive him, thrust burning coals into her mouth till suffocation ended her life. To come nearer home, let us rather commend such love as Her Majesty Queen Victoria has manifested for the late Prince Consort, in no sudden or shocking outburst, but a life-long love and sorrow. In contrast with the above examples may be mentioned that of Nero, who, for some trivial offence, kicked his wife

Poppaea Sabina in such wise that she died; and Periander of Corinth, who threw his wife on the ground and trod her to death.

Love is so persuasive and attractive that there are few of the fair sex that will not return the affection of a good man. Then the manners polish, the tones of voice become mellow and subdued; the intellect acquires clearness, and every noble spark in the soul is fanned into a flame. Such love often results in marriage; but marriage not seldom takes place where there is no love, as when a man marries for money or social position. He who does so is at once imprudent for himself and cruel towards his partner. He is like one who cuts down a tree to obtain the fruit; his future happiness is destroyed for a present advantage; and the woman he has wedded has got but a soulless carcase as her companion for life. To the honour of woman be it said that unless influenced by her relatives she is less open to the seductions of wealth, and disposed to be more true to the loving instincts of her nature. But too many parents in our day set their hearts chiefly on rich husbands for their daughters, regardless of the state of their affections. This is virtually selling the girls to the highest bidder, and reduces the most solemn contracts of civilized life to a level with the usages of barbarism. In Egypt, Syria, and Turkey women are commonly bought for wives. So in Circassia, Tibet, and all over China. Sir Samuel Baker says that in some parts of Africa a wife may be bought for thirteen needles. This is honest trading in women as chattels or live stock, differing only in the price and the manner of sale from the chicanery of mama and papa in countries called civilized. Those who thus marry persons they do not love are likely soon to love those to whom they are not married. A hell on earth is the consequence, however the fact may be disguised. To girls whose affections have not yet been blighted, I am tempted to say, do not allow yourselves to be bartered for a palatial mansion, the position of a lady, or the wealth of gold and silver. Marry for love and nothing else, if you marry at all. Yes—by all means marry; it will develop your character as nothing else can. To live with another, learning to bear and forbear, takes us out of self, and gives the most powerful motives to virtuous life, and noble aspirings. Nothing develops the human soul like the love of a wedded pair for each other and for their offspring. To propagate human beings aright, and prepare their souls and our own for the life immortal, is far nobler work than to lend one's thoughts for tinkering up the imperfect souls and bodies that are brought into the world by improper marriages contracted through ignorance of physiological laws.

Yet whoever would rise to the highest eminence in literature, science, or art, should not marry, but devote his whole strength to the task before him. One mistress at a time is enough for any man; and he who makes a devoted husband or lover is not likely to rise above mediocrity in any purely mental occupation. It is a fact that most of the men and women who have attained great intellectual eminence, and especially those who have excelled in the plastic arts, have either been unmarried or married unhappily.

In the latter case they have been, as it were, driven from the social into the intellectual life with such force that they have for that very reason excelled. There have been many who have married after rising to eminence by giving their undivided attention to one pursuit; and if they have married happily we hear little about them; unless, indeed, such a man finds a wife able and willing to join heartily in his pursuits, and so organised electrically and magnetically as to be his opposite in these hidden forces—a counterpart and source of attraction. Need it be said that such cases are very rare; and that it would be difficult to exemplify the doctrine we are propounding by reference to facts, because the miseries of married life are generally hidden from the world, and most couples endeavour with more or less success to gain the reputation of being happy in each other. Nevertheless it may be taken as certain that many whose conjugal infelicity is unsuspected, have been by their mental sufferings on this score driven to a more entire devotedness to intellectual pursuits. If any short-sighted critic endeavours to controvert this argument by citing examples of happily married persons eminent in literature, science, or art, the answer is that if his evidence is but negative, founded on assumption without intimate and positive knowledge, it goes for nothing. As examples of spinsters who have attained to eminence and gained high renown may be mentioned Joan of Arc, Queen Elizabeth of England, Elizabeth Carter, Hannah More, Caroline Lucretia Herschel, Joanna Baillie, Jane Porter, Catherine Brown, Agnes Strickland, Charlotte Cashman, Elizabeth Blackwell, Rosa Bonheur, Laura Bridgman, Harriet Hosmer, and many others.

Among eminent bachelors—Thales, Diogenes, Praxiteles, Saint Paul, Peter Abelard, Roger Bacon, Francis Petrarch, John Wycliffe, Leonardo Da Vinci, Erasmus, Baccio Della Porta, Cardinal Wolsey, Nicholas Copernicus, Lodovico Ariosto, Raphaele, François Rabelais, Cardinal Pole, George Buchanan, Joseph Justus Scaliger, Galileo (had a son), Richelieu, Thomas Hobbes, Peter Gassendi, Rene Descartes, Gelee (Claude Loraine), Peter Corneille, Robert Boyle, Jaques B. Bossuet, John Locke, Sir Isaac Newton, Leibnitz, Fenelon, L. A. Muratorï, Alexander Pope, Emanuel Swedenborg, Bishop Butler, Voltaire, Abbé Rollet, David Hume, Jean Jacques Rousseau, D'Alembert, Dr. Adam Smith, Sir Joshua Reynolds, Immanuel Kant, Oliver Goldsmith, William Cowper, Gibbon, Antonio Canova, Hon. William Pitt, John Dalton, Baron Alexander Von Humboldt, Ludwig Von Beethoven, Thorwaldsen, J. M. Turner, James Montgomery, Charles Lamb, Hugues F. R. de Lamennais, Washington Irving, Nicholas Paganini, Lord Macaulay, Vincenzo Bellini, J. H. Newman, D.D., Jean B. Henri Lacordaire, Sir Edwin Landseer, Edgar Allan Poe, Henry Herbert Spencer. To this list could be added the names of all the Popes, Cardinals, and Romish priests.

Among unhappily married women who have arrived at eminence may be mentioned Elizabeth Rowe, Madame de Staël, Mrs. Hemans, Letitia E. Landon (L.E.L.), Madame Dudevant (George Sand), Anna Jameson, Mrs. Sigourney, &c.

So can we strengthen our position by pointing to numbers of eminent men who were unhappily married. For example—King Solomon, Socrates, Flavius Josephus (twice divorced), Dante, Niccolo Machiavelli, Albert Drurer, Michel de Montaigne, Sir Edward Coke, Lord Francis Bacon (divorced), William Shakespeare, John Kepler, John Milton, Jean B. P. Moliere, Sir Samuel Morland, John Dryden, Dr. Samuel Johnson, Dean Swift, Addison, John Wesley, Laurence Sterne, Denys Diderot, Sir Richard Arkwright, Franz Joseph Haydn, Linnæus, Hon. Thomas Erskine, Mirabeau, Lord Nelson, François A. Chateaubriand, Napoleon I., Duke of Wellington, Lord Byron, Percy Bysshe Shelley, Auguste Comte, Count D'Orsay, Lord Edward Bulwer Lytton, Abraham Lincoln, Horace Greely, Charles Dickens, Charles Sumner, Edwin Forest, Joaquin Miller, John Ruskin (divorced).

A fifth class would include nearly all the eminent persons not embraced in the foregoing. They are such as Michael Angelo, Murillo, Velasquez, Schiller, Ole Bull, and Jenny Lind, who gained celebrity in the single state and afterwards married.

Still another class would include those who, being reduced to widowhood, devoted themselves to intellectual pursuits, did good work, and rose to eminence.

Marriage, in its broadest sense, is the legal act by which a man and woman become husband and wife. *Marry* literally means to provide with a male; and this could of course be done in the way of promiscuous intercourse, which was doubtless the earliest mode of multiplying the species. History tells us that Menes, the first king of Egypt, and the founder of Memphis, instituted marriage about 4500 years ago. He may have done so from a selfish desire to keep a large number of women for himself; or for the more benevolent purpose of promoting peace and good order among his people, and of preventing the diseases that are propagated by indiscriminate sexual intercourse. Whatever was the motive of its originator, marriage of some sort must be admitted to be a prime necessity of society; that without which the nations would relapse into vice and anarchy; or at best into that low state of civilization which preceded the institution of marriage. People then lived in small tribes, neither able nor willing to establish great and powerful governmental compacts, such as now secure both individual and national rights, and bring the collective wisdom and power of communities into harmonious working and intellectual progress. Some system of marriage is necessary; but that which has long obtained in those countries that take the lead in civilization appears to be losing its hold on the people who have submitted to it. We infer this from the increasing number of divorces, and also of voluntary separations, as where the husband is in business in London or New York while the wife is in France or Italy, if not in some rural seclusion in her own country; both parties apparently as well satisfied as when they lived together, yet not seeming to have any serious quarrel.

The Divorce Court was established in Britain in 1858. The number of divorces actually granted in England was 24 in the

year 1850; it amounted to 103 in 1860; to 154 in 1870; and 215 in 1873. But these figures represent only a small proportion of the petitions presented for such divorce. The judicial separations were 22, 25, 22, and 23 in the above years respectively; showing that while the desire of complete freedom with power to marry again is on the increase, the demand for separation without this privilege continues much the same. On the other side of the Atlantic the marriage tie seems to be still oftener severed. It is said that in Rhode Island and in Connecticut one out of every eleven married couples have been divorced. This increase of divorce is evidence either that our marriage system is faulty, or that the people are growing more immoral. The latter I deny. True, our public papers abound with reports of drunkenness, assault, and murder, but this is not because these things are on the increase; it is that there is more opportunity both for ascertaining and publishing the facts than there used to be. Statistics show a steady increase of the population of England, and a decrease of crime. In 1868 there were 15,033 criminal convictions in England and Wales; the next year, 14,340; the next, 12,953; the next, 11,946; the next, 10,862; and in 1873 there were 11,089. In Scotland, the criminal convictions in 1860 were 2414; in 1870 they were 2400; and in 1873 they were 2230. In Ireland there were 3350 in 1858; but 2542 in 1873. These figures would go to prove a diminution of crime; and we conclude that the increase of divorce arises from the fact that the present system is found more and more to be unsuitable. The remedy may be difficult, but I shall offer a few suggestions on the subject. Marriage might be made a purely civil contract, properly witnessed, and rendered law-abiding by being recorded in the nearest town or city clerk's office; such marriage to be annulled by the said clerk whenever both parties desire release. The disposal of the property and the custody of the children would require to be provided for. My suggestion would be that the amount of property held by each should be registered with the fact of the marriage; and if the man had property and the woman none, then at the separation the woman should receive a hundredth part of her husband's property for every year she had lived with him; and *vice versa* if the woman had property and the man none. If one had more than the other, then the sum possessed by the poorer partner to be deducted, and the hundredths as aforesaid to come out of the remainder. With respect to the children:—An only child to go to the mother; the second to the father; the third to the mother, and so on. In case only one of the parties desires release, that party to file an application, and at the end of three months bring evidence to support it. If the officer deem the cause insufficient, the case to stand over for a year, when, if the party still demand divorce, he should be obliged to grant it.

As the marriage law stands at present in English-speaking countries, parties can choose when to enter the marriage state, but getting free from it is a great difficulty. But freedom of thought is as sweet at one time as another; and, forasmuch as the body is

our own as much as our mind, a man or woman should have freedom to use the one as well as the other, if this can be done without infringing on the rights of another. Wedlock is made slavery by the present system of indissoluble marriages; the increase of divorces testify to its irksomeness; and unless it be remedied it will in time do away with marriage altogether.

Some who have never viewed the matter in this light may suppose that if the tie of wedlock could be so easily undone, it would ruin the fabric of domestic life, destroying confidential faith, mutual obligations, and family discipline. To these timid people I reply that proof to the contrary is found among the beautiful blue-eyed, pearly-teethed, raven-tressed Druesses, inhabiting a portion of the Lebanon mountains in Syria. The religious opinions of this intelligent and powerful tribe are neither Christian nor Mahommedan, but a selection from both creeds. They marry early; say the male at 16 and the female at 14. Each man takes only one wife, and has the absolute power of divorcing her when he pleases, paying her the dowry stipulated before marriage. Yet divorces are rare among them; much more so in proportion to the population than in English-speaking countries. The bride is warranted virtuous by her mother at the time of espousal; and if she prove unfaithful, she is condemned by her father, and beheaded, generally by her eldest brother.

Contrast this with the state of Great Britain, where numbers of men remain unmarried, and the spinsters would form a large army. In 1871, there were 879,944 more females than males in Great Britain and Ireland. The ladies of the British Isles are very attractive; but numbers of young men regard marriage as a legal trap—once in, no release. If it were made less difficult to get out of, people would not be so much afraid to enter, and this very freedom would conduce much to make them endeavour to retain the affections they have won. As for the evil of breaking up families, if they desire separation no misery can be greater than enforced cohabitation; and the effect of continual quarrelling upon the domestic circle must be at once painful and injurious. The sooner it is broken up the better.

Marriage is of various kinds:—

1. Polygamous—that is where a man marries more than one wife. There is a tribe in New Zealand who compel the man who marries one daughter to take all her sisters. Solomon, David, and several other Biblical characters seem to have been polygamists. In our own day the Mahommedan inhabitants of Turkey, Egypt, and the neighbouring countries may take several wives; in China a man can have only one, but as many concubines as he pleases. The Kafir of South Africa is obliged to accept as many as his neighbours choose to send him from among their daughters; but he makes them work while he idles and smokes. The Mormons of North America, though mostly Europeans, maintain polygamy with religious zeal. But it does not seem adapted to the condition of white races in cool climates; and a strong argument against it is that the number of males and females born is nearly equal,

indicating that Nature intended one woman for each man. It appears, however, that in Turkey and some parts of Asia the female births preponderate, which would be a fact in favour of polygamy in those regions. It cannot be shown that immorality is necessarily the result of this state of society; neither can it be averred that it has always been under Divine prohibition. It was practiced by some of the best characters delineated in the Bible; and was tolerated, and in some cases enjoined, by the law of Moses. However, according to the usages of modern civilization, one wife is generally as much as a man can care for as he ought. Moreover, polygamy does not treat women as men desire to be treated themselves; for what man would like to share the bed of his wife with eighteen or twenty others, to say nothing of the Kedive of Egypt's 350? When we men fancy ourselves in a position similar to the woman who has the twentieth part of a husband we seriously object! Besides, polygamy lowers the position of woman; and when we consider how elevating and improving is her influence on the community when she enjoys the position of equality with the other sex, we close the argument against polygamy for ever.

2. Polyandral marriage is where one woman can have many husbands; and strange as this appears to us, it actually obtains in certain parts of Asia. In Thibet it prevails to such an extent that almost every matron has several husbands, these being generally brothers. In Ceylon if a rich woman marries several poor brothers, she takes them all to her house; but if a poor woman marries a wealthier family she goes home to them. Humboldt states that polyandry prevails among the tribes of the Orinoco in South America; also among the Avaroes and the Maypures. We hear of it in New Zealand, in Paraguay, in the Aleutian Islands, in Upper India, in Lasser, and various other places. Moreover, we have records of its practice among the Germans, the Picts, and the Irish of early times. This only shows into what absurdities a people may be plunged by fashion and custom; and how the most unnatural and repulsive usages may become familiar, and appear even laudable.

3. Communal marriages are where a whole community agree to cohabit as they desire, have husbands and wives as well as all other possessions and rights in common. Several ancient writers mention examples of this social condition; and there is now such a community about four miles from Oneida, in the State of New York. Having visited the place myself, I am satisfied they are as industrious, orderly, temperate, intelligent, and healthy, as any other people. They number several hundred members, have a nice clean village, schools, a lecture hall, silk and iron factories, and several hundred acres of fertile land. A very prosperous Swedish community of the same kind is established in the north-western part of Illinois. They have a large tract of exceedingly rich land, raise everything necessary to eat, and manufacture all they require to wear. In both the above settlements there is freedom for any member to withdraw, but very few leave. The above-mentioned

people live together in communities, having sexual intercourse as well as everything else in common. Even in England this has been tried. Mrs. Girling, a Suffolk woman of the labouring class, gathered, it is said, above 100 near New Forest. Not being proprietors of the land, however, they were ejected, and may have difficulty in obtaining a settlement elsewhere. Besides the community of property, they have kissing, jumping, &c., as part of their religious exercises.

The French Communists (more correctly destructionists), who lately destroyed so much valuable property in Paris, were in hopes of establishing general and equal rights, if not social intercourse.

The great objection to this system is that such societies must be small and secluded, which tends to narrowness and ultimate deterioration. Hence it is not the best system of marriage, though far superior to polygamy and polyandry.

4. Monogamous marriage is that common to almost all Christian nations—one man marrying one woman. Though not wholly free from objection, there is much in its favour, and it is certainly the best.. It tends to prevent the spread of venereal disease; it places man and woman on an equality, or nearly so; and gives every one a fair chance of obtaining a companion. As it is needless to dwell on matters so generally understood, I proceed to give some hints on consanguineous marriages.

In all animal life, the great secret of improving the species is crossing the blood. Men have long understood this in reference to the domestic animals, and have learned to select such combinations as to improve the stock. Why has not this been more carefully studied in relation to mankind? By the same law the breeding in, as it is called, deteriorates the race, whether it be man, dog, or monkey; and the greater the crossing the more perceptible the effect on the offspring. Wherever the blood of different races of men commingles in a temperate climate, the tendency is to relax the whole system; and this produces blue eyes, light hair, fair complexion, larger stature, and that desire for change which leads to progress. The difference between a blue eye and a black is that in the black the sclerotic and other coats are more tensely drawn. This can be demonstrated in the eye of an ox by taking it out of the head, and pulling the sclerotic coat at the back; the colour instantly becomes black; but on relaxing the tension, it recovers its natural light colour. The relaxation from crossing the blood extends to the whole system, and produces a larger growth; this increase of stature gives improved strength; and the addition of cultivation renders the hair fine. The inferior and uncultivated races have always black eyes and coarse hair. On the other hand, consider the people of Great Britain. Every schoolboy ought to know that the earliest known inhabitants were Celts or Arabs; and that among these came Picts, Romans, Saxons, Scandinavians, and Normans before the middle ages. This already mixed race is now intermarrying with the nations of continental Europe, Asia, Africa, and America. And what is the result? Why, that Great Britain has the finest, largest, healthiest,

and best-muscled men in the world. I have travelled in each of the States, and almost all the Territories of America; also in Canada, and in every country of Europe; have visited Asia and Africa each three times, and have spent some time in Great Britain. In no direction have I seen such large, cleanly, well-deporting soldiers as in Britain. Some others may be better fighters; but they are not so high a type of humanity, even as the tiger is a better fighter than the ox, but not so advanced a specimen of animal life.

If we take commerce as one indication of the strength, civilization, and general advancement of a people, we have the fact that the tonnage of sea-going steamships in the whole world is 5,244,888, and more than half of this belongs to Britain. The sailing vessels of the world have a tonnage of 14,521,630, of which more than a-third is British. The American shipping ranks next; then the Norwegian, Italian, French, German, Spanish, Greek, and down to that of the Asiatic or unmixed races, who have the least commerce of all. So much for enterprise. Then as to intellect, Britain has produced more men whose works have attracted the attention of the world at large than any other country. Witness Newton, Bacon, Shakespeare, Milton, Byron, Macaulay, Scott, Dickens, Owen, Darwin, and others. If, again, we take the rareness of murder as evincing a high type of humanity, the murders in England are in the proportion of one to 178,000; in Holland, one to 163,000; after these Prussia, Austria, Spain, and Naples, in order; till we find murders in Rome as one for every 750 of the population. At the present day the people of the United States are mingling their blood rapidly with Negroes and Indians, besides European and other settlers. Already they are tall, strong, enterprising, intelligent, inventive, and progressive. They are marching right up the hill of improvement; but their full development will appear only when time shall have given due effect to the blood mixture of the race. Some people claim for religion that it has done all this work. But why then does not religion elevate the devout Arab, and the superstitious Spaniard, and make them progressive? Try the effect of religion, the very purest, sincerely embraced by a Negro couple united in wedlock, and see whether the children have straighter hair, or fairer complexion than other Negroes. But let the Negro marry a white woman, the children will be fair, and generally more clever than either parent. Let the mulattoes marry, and their offspring will generally be lighter complexioned, and more susceptable of educational influences than the parents. When the North American Indians intermarry with white people, they soon rise in the scale of civilization. Witness the Cherokees, who are half-breeds; they live in houses, and have schools, churches, printing-presses; they have invented an alphabet, and print a newspaper in their own language. Why did the ancient Romans prosper and rise to such eminence in literature and art? Because they took to themselves women in every country they conquered. The Greeks did the same thing; and their works in poetry and sculpture are not excelled at this day.

Change of blood produces change of thought. A quiet, sensible man becomes a maniac and a demon, as soon as a few glasses of strong whisky have passed from the stomach into the blood; and if such a change can be produced in a few minutes by certain elements thrown into the blood, what revolutions may not be expected from the mixtures introduced by matrimonial crossings continued through several generations? It is said that the fine large Durham cattle which are annually exhibited as choice specimens of English skill in breeding, are the product of small gnarly beasts that through several generations have been properly crossed and carefully nurtured. On the other hand the diminutive sheep, cows, and ponies of the Shetland Isles, are so chiefly owing to their isolated position, in consequence of which they are always inbred. Even the fruits of the earth acknowledge the same law; the finest apples came originally from the sour crab; and the most luscious plums from the wild red one.

All civilized nations hold that marriage among blood relations tends to deterioration, and should not be permitted. Some even of the inferior races recognize the principle. There are four great classes among the natives of Australia; these are subdivided each into six or eight clans; and no one may marry a woman of his own clan. On the other hand, there are tribes living secluded on islands; and these, like the Aztecs of Central America, have intermarried with their kinsfolk, till they have become dwarfs in stature and imbeciles in intellect.

I repeat here what I stated last year in a lecture before the Anthropological Society of London, that undoubtedly all the inhabitants of the United States, whose ancestors have lived there for five generations, or eight at furthest, have more or less of Indian blood in their veins. And in reply to those who regard this mixture as adverse to intellectual improvement, we may cite the case of Mrs. Henry Rowe Schoolcroft, who was a half-blooded Indian, and a superior scholar. She wrote nearly all of that large work published as her husband's on the Indians of North America. Also Catherine Brown, a half-blooded Cherokee, whose parents could neither speak English nor write, learned to read and write in three months, which exceeds everything on record in America or any other country concerning rapid progress. She became a successful teacher and author; pure as sunlight in her personal character, and an eminent Christian philanthropist.

With respect to forms of marriage it may suffice to remark that the reports of the Registrar-General of England indicate a steady decrease in the number of marriages celebrated in churches, and an increase of rites purely civil. The latter were 2·3 per cent. in 1841-1845; 8·9 per cent. in 1866-1870; and 9·7 per cent. in 1871.

In Scotland marriage may be contracted without religious rites, by the parties going to a justice of the peace, and accepting each other as husband and wife. His certificate is binding, even if the couple do not live together. Cohabitation alone is held to be marriage in Scotland, if there has been either a promise of marriage

beforehand, or an acknowledgment of it afterwards. It is the same in the State of New York. A couple can marry themselves by simply declaring that they are husband and wife. The Indians of America, like most other savage tribes, have a vast amount of ceremony about marriage. But why should not civilized nations adopt the mode which is at once the simplest, the easiest, and the best, abandoning all those ceremonies which are the relics of barbarism? How often is a worshipping congregation wearied with listening to the banns of all the washerwomen, cooks, and chambermaids in the parish who intend to contract marriage with the hostlers, grooms, footmen, and others. The English Marriage Law Commisioners have expressed their opinion that publications of banns are valueless as safeguards, while they form an unseemly interruption of Divine service. It would seem far better that a couple desiring marriage should simply go to a justice of the peace or other appointed civil authority, declaring their wish to marry, and their consent to live together as long as they can agree, and let him thereupon pronounce them married persons. Where no marriage recognized by law has taken place, the children resulting from cohabitation are held to be illegitimate. The Registrar-General for England in 1871 reports that a woman, being questioned respecting her children, said, "Let's see—first wor a chance un; second wor a chance un; third wor all right; this is the fourth." Another known to be illegitimate herself, applied for parish relief when her sixth bastard was born. Her mother being present, was asked if she ever had illegitimate children. "Yes, your honour; six." "Are you not ashamed of yourself!" "Ashamed? No; I've work'd for 'em, and 'ave kep' 'em; why should I be ashamed?" There are in England about 800,000 children born every year, and 119,594 die within the first twelve months of life. There were 44,775 illegitimate births recorded in England in 1874; but these are on the decrease. There are few either in Britain or America free from illegitimate blood; and if they would trace it out, they might learn to be more charitable to erring ones.

When to marry is a somewhat difficult point to settle, because one is fit at 18, another at 25, and a few, never. Early marriages seem to me to be desirable; at least those intending marriage should complete it before their opinions and habits have become so fixed that they cannot bend or conform to the differing but reasonable ways of another. Too great disparity of age militates greatly against comfort, and sooner or later brings in jealousy, that bane of conjugal felicity. Yet how often do we see January wedded to June, crabbed and withered age united to blooming youth. In England in the year 1871, 238 men and 32 women married at 70 years of age and upwards; several of them were 80 or more; and one widower above 90 was united to a woman of 50. The average age for men marrying or re-marrying was 27·9; and for women 25·7 years. The same report informs us that 35 spinsters were only 15. An elderly person is apt to be philosophic, while the youthful mind delights in facts and superficial knowledge, impatient of the examination of principles. It is well if this

difference is the only occasion of estrangement in an unequally-matched pair. The young woman naturally loves the company of the young; and if she indulges her feelings, the old man becomes jealous, and of course testy, pettish, distrustful, and so unsettled in mind as to be little fit for business. On the other hand, when wives become a prey to jealousy, they become suspicious, watchful, irritable, and disposed to whine and weep. So perishes from sight every noble and beautiful characteristic. Jealousy has often led to murder; as in the case of Justine, esteemed one of the finest women in Rome. She married a man who, in a fit of jealous madness, cut off her head with his sword. A trivial matter, especially if there is any mystery or concealment about it, may give rise to fatal jealousy. History records that Eudoxia, the beautiful wife of the emperor Theodosius, gave an apple to one Paulinus, and denied it when questioned by her husband; but he, obtaining proof of the fact, put Paulinus to death, and banished her from the imperial bed. Wives, by all means speak the truth to your husbands, or remain silent.

When a Frenchman suspects his wife of unfaithfulness, he takes the matter coolly, and makes love to another woman; but when an English husband becomes jealous, he smashes his rival's brains out, or procures a divorce.

It is amusing to visit different countries, and learn their various ideas respecting marriage. In Russia and Greece, the priests of the Greek church are not allowed to officiate in any service unless they are married; so that if a priest's wife dies, he is virtually suspended till he marries again. On the other hand, marriage is forbidden to the priests of the Romish church. In England it is illegal for a man to marry the sister of his deceased wife. The Rev. W. M. Punshon, desiring to wed his sister-in-law, had to expatriate himself, and take an appointment in Canada, where the laws allowed him to fulfil his wishes. The established church of England does not permit marriage to be celebrated after twelve o'clock at noon. So in one country a thing is right, which elsewhere is held to be quite wrong; and the traveller begins to think that right and wrong are matters of education and circumstance, having little foundation in reasonable principles.

When a couple are properly married, it becomes an important matter to endeavour to live happily together; and a few hints may not be amiss in this place.

Mutual concession is the great secret of conjugal happiness. Moreover, a married couple must be true to each other, or domestic infelicities will appear in their household, innumerable as stars in a clear sky at nightfall. Virtue should not be expected from one sex only. When men are required by the laws of society to be as pure as women, the social fabric will stand on a surer and better basis than at present. Husband and wife should place implicit confidence in each other.

To retain the affection of your wife, praise her, and pet her, and in every way treat her after marriage as you did before it. At least be respectful to her, and she will honour if not love you. A

married couple should engage if possible in the same occupation; unity of interests, and similarity of pursuits will promote harmony; whereas dissimilarity of tastes and employments is apt to produce estrangement.

A wife who tells that she and her husband do not live happily, is politely advertising for a lover. And if a husband mentions among his friends that he and his wife do not agree well, he is publishing to the world that he loves another woman. It is natural for everybody to love constantly; and he or she who does not love at home, will soon find an object of affection elsewhere.

Of all matters connected with this subject, none is so worthy of careful attention as that of parentage, which is, or ought to be, the end of marriage. In our earliest perceptible stage of existence, we live in an egg, which is the one hundred and twentieth part of an inch in diameter. Vast mystery surrounds this epoch of life. During this egg period, and even before it, the mother is forming the future character of her child. Every thought and desire, love or hate, upward aspiration, or angry emotion is then telling on the future offspring. Parental responsibility, therefore, commences months before the child draws its first breath. A kind, loving spirit in the mother, strengthened by noble desires, may give to the world a philanthropist; a sudden gust of passion may produce a murderer; avarice is likely to generate a miser; a conjugal quarrel may issue in a pugnacious disputant. Almost every mother may trace the fretfulness of her child to her own unpleasant surroundings before its birth, or to the irritation produced by ill health or other cause. Over-work, over-eating, drunkenness, sexual excess, want of harmony between the parents, each or all are evils tending to produce weak and unbalanced minds in the children; whereas organizations naturally great, good, and harmonious are the flowers of happy homes. Genius may spring up in irregular, unbalanced families; but it will be found one-sided, bent, and warped. Ignorance of the laws of parentage fills our prisons, pauper-houses, and criminal lists to an extent little appreciated.

The man who expends all his energy in mental labour, loses physical stamina in proportion, and has less power to generate offspring. Hence our great men are apt to be childless, or at best to transmit very moderate abilities to their offspring.

Thus do we see that monstrous births, imbecility, crime, insanity, on the one hand; and on the other, genius, philanthropy, all that lights humanity like the brilliant sun of noonday, may be ascribed to natural causes; and that love, marriage, and parentage, with all their results, are guided and governed by the great and beneficent laws of nature, established for the highest good of the universe now and hereafter by the All-Wise Creator.

THE

NATURAL HISTORY OF THE EARTH.

A Lecture

BY

DR. J. SIMMS, OF NEW YORK,

DELIVERED NOVEMBER 16th, 1873,

IN FREEMASONS' HALL, LONDON, ENGLAND,

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ENDOWED with but finite and imperfect intelligence we find ourselves clearly overtasked, when we attempt to grasp the mysteries of the Infinite. The ideas of time and space are, beyond all question, those upon which we most frequently exercise our faculties. Yet, of time without beginning or end, and of space without limit or boundary, we find we have no satisfactory comprehension whatever. For proof of the reality of Infinity of time and space, therefore, we are indebted to negative rather than positive evidence; and it is only when we attempt to surround those ideas of time and space with barriers of limitation, that we discover, that while the hypothesis of Infinity baffles the understanding without shocking the reason; that of limitation is quickly rejected as wholly untenable and ridiculous. In like manner, as we cannot conceive of time not preceded and succeeded by time; or of space, which is not simply the pathway to more space beyond, so can we have no conception of any possible form of matter which has been produced otherwise than from matter previously existent. Rejecting the notion that in some way or other entity may be constructed out of nonentity, a little reflection will demonstrate to us the fruitlessness of carrying retrospective speculation respecting the antecedents of the universe too far into the remote recesses of the past. Let the mind reach a stand point ever so remote, and the bewildering reflection is forced upon it, that by not even a simple second of time has it approached a beginning. Change and motion, indeed, we find everywhere, and ever active; but of "beginning or commencement," even in their widest significations there appears to be none. We shall not therefore, waste time over unprofitable surmises in a region of time very distant relatively from our present era. Our present business is confined to our own earth only, and to the time that has elapsed, and the changes that have been wrought, since, purely a gaseous body, it took its place in the solar system. This period of time, though long enough to render figures comparatively

useless in presenting an idea of its duration, is, in point of fact, as insignificant in relation to infinity of time, as the cubic measurement of our planet is to infinity of space.

If we examine closely into the nature of the changes that are taking place on the surface, in the atmosphere, and in the interior of our globe at the present day, we may, with very little difficulty, be thoroughly convinced, that the tendency of those changes is invariably in the direction of solidification. The less tangible forms of matter, such as water, and the various gases which surround and percolate the Earth, are perceptibly though slowly progressing to the denser forms of soil and rock strata. The *modus operandi* of these transformations does not fall to be discussed at this early stage of our treatment of the subject; but it is necessary to establish the fact, so as to form a basis on which to ground the gaseous hypothesis which we propose to enunciate respecting the earliest conditions of the Earth as an independent planet. In the present condition of our own satellite, we find the process of solidification at a much more advanced stage of progress, than that to which we have attained; but we must not therefore infer from this, that the Moon is of older date than the planet round which she revolves. Her size is insignificant compared with that of the Earth; and naturally the amount of gaseous matter, with which she began her career as a planet, was so much less than ours, that it has been worked up and transformed into rock in a proportionately less extended period of time. Whatever may have been the stages through which she has passed, she is now entirely destitute of the lighter forms of matter: there does not seem to be a vestige of an atmosphere surrounding her, and no water rests upon her barren surface. As general principles must be held as general in their application, we conclude that she has ages ago passed through and finished the solidifying process which we are experiencing at the present moment; and that in her present condition we undoubtedly see that to which we ourselves are travelling.

In view then, of this transformation of fluid and transparent matters into solid and opaque, which we see going on in our Earth, and of the stage of solidification to which our satellite has already attained, we find on *à posteriori* reasoning, that at the point at which we have proposed to ourselves to take up the "Natural History of the Earth," no so-called solid matter existed within its bounds. The present firm material on which we tread, and of which we ourselves are composed, existed certainly—every atom of it—but in another form—in that of gas, the component parts of which, however, must in all likelihood for ever remain unknown. In the nebulæ which the advancement of science has enabled us to discover and examine, it is not unreasonable to predicate that we have gaseous worlds in, so to speak, an early stage of existence; and arguing *a priori*, we may assume that these nebulæ have before them careers similar to that through which we are now passing, and through which the moon seems already to have passed. It is doubtless to the agency of electricity that we must look for the operations carried on in the laboratory of Nature at this

early period. This subtle force is even now but imperfectly understood; but enough we do know to warrant us in crediting it with many wonderful properties, while we confidently anticipate that the progress of scientific discovery will in the future disclose others still more wonderful. Evolved from the oxygen, which formed a considerable proportion of the combined gases, its restless energy was employed in setting in motion and dispersing in fragments the vast mass of gaseous vapour which formed the storehouse from which future worlds were to be made, and which must have occupied a portion of space of inconceivable extent. The disintegrated gaseous fragments had conferred upon them, in virtue of one of the properties of electricity, the globular form which, so far as we know for certain or are able to conjecture, characterizes all heavenly bodies revolving in regular orbits. This inscrutable tendency of electricity to circular motion is universal, and examples may be found alike in the chemical laboratory, in the now familiar telegraph, and in planetary forms. It influences all creation in this circular direction; and if a drop of water or of quicksilver be cut in two with a knife, the separated portions instantly assume the round form and become individual globules. The same force is expended on solid matter; and if this force is not sufficient to effect its purpose, it is simply because other localized forces (such as attraction of cohesion) counteract that of electricity by their superior strength.

We must imagine, then, our world in its primitive state, composed entirely of the gaseous matter rent from the central mass by the action of electricity, of which oxygen is the universal basis of all electricity, taking up its position in the system, occupying, of course, an immeasurably greater extent of space than it does at present, and receiving by the action of the same agency that form of a perfect sphere which, with some slight explainable modifications, it still retains. These modifications consist of a flattening at each of the poles, and some unimportant inequalities of surface; the former due to centrifugal proclivities arising from the diurnal motion of the earth round its own axis, and the latter to the various forces acting from the interior on its crust. These disturbing forces will be considered in a more advanced portion of the lecture; but it must be borne in mind that the form which our earth at first received was that of a perfect sphere, with smooth surface, unbroken by elevation or depression. If at this period the sun was sufficiently condensed to emit the rays of electricity which we term light, those rays must then have passed through the transparent medium of the earth without distributing either light or heat. It is a popular fallacy to suppose that when we see the sun blazing in the heavens, it is lighting up and warming every inch of space to which its rays can pierce. The fact is, that these rays pass through those regions absolutely without any effect whatever, and it is only when they strike on some substance sufficiently condensed to refract, instead of absorbing them, that the effects of light and heat come into operation. A familiar illustration of our meaning may be had on any starlight night. The

spaces between the stars have the appearance of intense blackness, although all the while the burning rays of the sun are shooting through them, and it is only when here and there the body of a planet is struck that their action becomes apparent. Likewise, in broad daylight, when we seem to fancy that the entire space between us and the sun is gorgeously illumined, the real fact is that it is only a spot here and there which is not plunged in utter darkness. So long, therefore, as our planet retained its purely gaseous condition, its relation to the sun was of the very slightest description. Water, however, is a substance sufficiently condensed to produce refraction of an imperfect kind; and when at this time the action of electricity had so far progressed as to have condensed a portion of the gaseous body of the earth and transformed it into water, the influence of the sun became felt, and the infant planet may be said to have entered its second condition. The almost every-day phenomenon of a rain-shower is a familiar example of the condensation of gas into water by electricity.

At this early stage the water as it was formed took up its position in the very centre of the sphere, in virtue of its superior density; and this process continued for ages, until the earth was composed of this central body of water, surrounded by an enormously thick bed of surcharged atmosphere, constantly undergoing the process of condensation into water. This process was gradually diminishing the aggregate bulk of the whole, and more and more approaching to the lessened magnitude and other conditions which we have at present. A further grade was by this time probably reached in the commencement of the formation from water by condensation, through the agency of electricity, of mud and soil—the forerunners of the more compact matter, which we now know under the guise of the various rock strata. When sufficient electricity had been produced from the oxygen of the atmosphere to act upon the particles of water, this gradual process of rock forming was begun, and it was afterwards aided and supplemented by a variety of other agencies, which we shall presently mention. This new material being of a higher degree of density than either the gaseous matter or the water, naturally sought, as its final resting place, the nearest possible approach to the centre of the globe, where it remains—forming, in fact, the first bottom to the vast ocean of water which on all sides surrounded it.

We shall treat more fully elsewhere of the advent of living organisms; but, as one of the several agencies continually adding to this solidifying material, we may say here that, in all probability, by this time the waters were swarming with certain low orders of animal life. These, extracting silica and lime from the waters for the construction of their shells; or, as in the case of the coral, for their fixed abodes in the rock—were continually adding their quota, in shells, &c., to the gradually increasing deposits of hard material ever finding its way to the bottom of the sea. Atmospheric dust, seaweed, and the drawing in of aerolites from without,—regarding all of which we shall have more to say before we have done,—all lent their assistance in increasing the bulk of these

deposits. The inconceivable pressure to which, owing to the immense superstructure of water, they were subjected, must rapidly have transformed these loose particles into hard rock strata, while to this same immense pressure is probably also due the absence, in the earliest rock formations with which we are acquainted, of fossil remains. It must not be overlooked that these remote operations which we are so rapidly sketching occupied periods of time of almost inconceivable length. Figures are nearly useless for representing in numerical language those nameless ages of time; but it is necessary to bear this in mind, as otherwise we are apt to carry away erroneous ideas of the progress of construction.

We now approach the era which witnessed the first formation of dry land. Life in the waters must have become very abundant, and probably the principal organisms were characterised by wondrous fecundity, rapid growth, and short duration of life. These organisms, dying in countless myriads, and forming at the bottom vast deposits of carbonaceous material in a moist condition and subjected to enormous pressures, the first rude shock to the placid progress of the planet would have its origin in the generation of spontaneous combustion. We have in this the undoubted first kindling of those internal fires which have burned for long ages, and which have wrought changes so wonderful in the crust of the earth, and on its surface. The first outbreaks of internal conflagration were very likely of most destructive violence, spreading over immense areas in the interior, splitting and upheaving rock strata, and threatening total destruction to the orb itself.

The liberation of these imprisoned spirits of violence formed one of the most important of the epochs which have marked the slow course of events above and underneath the crust of our planet. The hitherto unbroken surface of the ocean was now pierced in every quarter of the globe by immense wedges of solid material, upheaved from the strata, deep down in the ocean's bed; the first series of continents, islands, and archipelagos, now sprang into existence; and the first step was taken for the reception of a new set of organisms, or, we should rather say, for the development from existing organisms of a newer and higher order, capable of sustaining life in direct and continuous contact with the atmosphere. This first dry land would, for ages, present a rude and uninviting aspect; but, by slow degrees, vegetation would gain a footing and spread, with an ever-increasing ratio of speed, until it reached that perfection of rank luxuriance known in geological tables as the carboniferous era. The origin of this terrestrial vegetable life is probably to be ascribed to evolution from pre-existing marine specimens, vast quantities of which undoubtedly shared in the gigantic upheaval which we have just noticed. Here we have another powerful lever added for the furtherance of the great work of condensing fluid and aqueous matter into solid; but this solidifying tendency of vegetation we shall consider more at length presently, when we come to examine these operations more minutely, and from a closer stand-point than hitherto. This

original distribution of land and water was not permanent, and bore no resemblance whatever to our present geographical condition. The activity of the internal fires continued to bring about cycles of changes from this distribution, until, through the tedious course of ages, and at a comparatively recent date, the coast lines of the present were established.

Let us now, before proceeding to other features, examine at some length, those grand processes of solidification which may be regarded as the ruling passion of Nature.

The term "solid" matter is somewhat of a misnomer. There are different degrees of density in different substances composing our earth—that is, the individual particles of which these substances are made up are more or less closely compacted; but the term "solid," as applied to matter, must be taken only as a relative term. Taken absolutely, we have no knowledge of solid matter. Rocks are all more or less porous; and even the diamond, the most highly condensed of solid material with which we are acquainted, is full of minute holes or interstices not perceptible to the naked eye. This being the case, our Earth occupies or encloses a much larger amount of space than would be the case if the particles composing it were more compacted. It is said that when Faraday was once asked how large the earth would be were it compressed into a perfectly solid mass, he replied, in effect, that it would probably not exceed a cubic foot. It will be understood, then, that, in speaking of "solid" matter, we use the term in its relative and not in its absolute sense. There is round the earth in our present atmosphere a quantity of material, such as carbonic acid, oxygen, and other gases, sufficient to form another globe of equal size, if compressed to the same degree of solidity as the Earth.

We have already treated of the process by which solid matter is evolved from gas by the action of electricity, and the presence of oxygen in the generation of electricity. The atmosphere surrounding our globe consists of 21 parts oxygen, 78 parts nitrogen, and about 1 part carbonic acid gas in every hundred parts. There is here an ample store of oxygen for the generation of electricity, this electricity, by its action, is gradually converting the invisible gases round about us into visible and tangible matter; and one-half of the entire solid matter of which the earth is composed, consists of oxygen. Electricity acting upon water condenses it, thus forming solid earth or soil, which may be proved by a very simple experiment. Take a bottle of the purest unboiled water, and after having it securely corked and sealed, set it aside where it will not be disturbed. In one month a little murky sediment will be seen in the water. After one year a considerable quantity of material will be seen; and in five or ten years a large amount of solid matter will be found to have been deposited. It will thus be seen that the process of earth forming is still going on; and instead of our globe having been created in some remote past, once for all, and then remaining stationary, the fact is that the growth of the earth has never for a moment ceased, and is still progressing from

day to day. And it is not by electricity alone acting directly on the surrounding atmosphere that these changes are being effected, but by a variety of means. The deep sea dredgings lately undertaken under the auspices of the British Government have shewn very clearly the enormous extent to which solid matter is continually being deposited on the bed of the ocean. Myriads of small shell-fish are constantly dying, and their shells falling to the bottom, gradually become transmuted into chalk. When we look at the enormous chalk cliffs of England, Ireland, and France, which have all been formed ages ago in this way, we see what stupendous results flow from the ceaseless action of apparently insignificant causes. In this way, too, ironstone and limestone are produced by the accumulations of vast numbers of shells, of which iron and lime were constituent parts. The coral reefs of Southern latitudes furnish another familiar example, where whole islands or groups of islands have grown, and are still growing, by a similar process.

The water on our globe has undoubtedly been turned into solid land to a great extent, and is still being slowly, but surely transformed into mud, soil and rock. The bottom of the ocean is filling, the mouths of rivers are gradually silting up and forming large deltas; everywhere the land is gaining on the water, and the water receding from the shore. The only apparent exception to this is the change being gradually effected on the East Coast of England; but this is clearly due to the altering conditions of the volume and current of the Gulf Stream, and it does not therefore militate against the general proposition. We often hear it thoughtlessly asserted that there is now neither more or less water in and around the globe than there ever has been; but such assertions are unworthy of serious consideration, and can only be ascribed to ignorance or superficiality of observation. The earth is becoming drier by degrees as the water is condensed by animal and vegetable life, and by electricity direct, into so-called solid matter. The proofs of this position are so numerous that we can only mention a very few. From ancient records we find that several thousand years since, there came a rain that lasted forty days and forty nights, and so much water fell that it covered every mountain. Geologists generally believe there have been twelve floods, and that the Noachian flood was one of these. There is not now water enough on our globe to flood or cover the entire earth. Let us assume that the ocean is, on an average, five miles deep, and that it covers four-fifths of the earth's surface, while there are mountains whose tops are five miles above the sea level. There could not now be found water sufficient to make every ocean five miles deeper, and, by doing so, submerge the summits of the loftiest mountains. History records the fact that in the time of Menes, first King of Egypt, who flourished 4570 years ago, all Lower Egypt was a morass. At the present day that tract of country is dry and in a high state of cultivation. Father Louis Hennepin visited the Falls of Niagara in 1678; and, in his work, printed in Utrecht in 1697, and re-issued in London in 1698, he gives an account of this wonderful natural curiosity. Seventy-two years after his visit, Niagara was visited by Kallam, a

Danish Naturalist, who found that the third or side fall described by Hennepin had entirely disappeared, the sources of its supply having been cut off in this brief interval. Mr. Klark, who resides at the mouth of the Patsjoki river, on the Arctic Ocean, informed me, when I visited him, that the site of a village in Lapland is recorded, in the archives of Norway, as having been a water-course only two hundred years ago. Besides this gradual condensation or solidification of the water, the solid matter of the earth is steadily increasing by the gradual withdrawal from the atmosphere of the oxygen and carbonic acid gas necessary to the maintenance of life in plants and animals. Plants derive most of their sustenance from the air; that is, they absorb from the air the gases, which are then combined and condensed into sap, and finally into fibre. An example of this principle of growth may here be given:—A willow tree, having been planted in a box containing 600 lbs. of earth, was allowed to remain growing for some time. When the tree was removed, it was found to weigh 1,063 lbs., and the box and earth having then been weighed were found to have lost only 6 lbs. of their original weight. Thus the tree must have absorbed and condensed during its growth over 1,000 lbs. of material from the air and water with which it was supplied. Millions of trees in every clime are daily and hourly absorbing and condensing the invisible particles of the atmosphere and transforming them into woody fibre which, by-and-by decaying, forms soil, and this in turn is eventually consolidated into rock. Doubtless a part of these absorbed gases is after a time, by the decay and material disintegration of the plants, set free, to mix again with the atmosphere; but the amount released is altogether incommensurate with the amount originally imprisoned; and this, without interfering with the general principle enunciated, simply necessitates the lapse of a longer time before the elements of our atmosphere can be wrought up or absorbed. A familiar example of the action of this law in former ages is supplied by the coal formations now found in almost all parts of the earth. These vast beds of coal, some of which are found at a depth of 2,000 feet, have been formed from the rank vegetation that clothed the globe in the remote ages of the past. I recently visited a coal mine in Sunderland, England, in company with Mr. Swan, a highly-respected and estimable friend of mine, who resides in that neighbourhood. The mine is about 1,800 feet deep, and we there found the seam of coal nearly seven feet in thickness, and another seam about the same thickness was being worked nearly 100 feet deeper. The vegetation of which these coal beds are composed was once on the surface of the earth, as nowhere else could it have grown; and the present depth at which it is found shows the extent to which solidification has taken place. Coal is composed of ferns, palm trees, and other vegetation, which in former ages must have flourished with rank luxuriance, owing to the warmth and the presence of large quantities of carbonic acid gas in the atmosphere.

These primeval forms of vegetation attained an immense height; and, as a grand volcanic eruption raised the bed of the ocean, and

it cast an unmeasured avalanche of mud over them, swept down and buried them, where they slowly decayed, and became transformed into coal. The proofs that the solid matter is increasing on all parts of the earth's surface are so numerous that the difficulty is to select from such a mass of evidence; and I shall therefore only enumerate a few other instances which have come under my own observation.

When I was in Suez the British Consul there informed me that when the Egyptians were engaged in building the fine iron bridge which spans the Nile at Cairo, one of the large iron tubes, on which part of the bridge now rests, was being sunk in the bed of the river, when its descent was suddenly checked, apparently by the presence of some solid and hard substance embedded in the mud. A diver having been sent down to ascertain the cause of this obstruction, it was found that the edge of the tube rested on a well cemented brick wall. A machine had to be constructed to break this wall, pieces three or four feet in length were raised to the surface, and the obstacle being removed, the tube settled to the depth of seventy feet, where it rested on the solid rock. This brick wall occurred forty feet below the surface of the river bed; and as such walls are originally erected on the surface of the earth, there is here strong presumptive evidence that there has not only been a change in the course of the river, but that an accumulation of soil had from various causes, taken place, and from the time of the building of the brick wall to that of the construction of the bridge, had reached the very considerable thickness of forty feet.*

Riding through Cairo, I saw a ditch, which was being dug by some Arabs, and at a depth of fifteen feet from the surface, there was found the stump of an olive tree. On close examination, I found that this stump was standing upright, evidently in precisely the same position as it had grown; the soil was the same as that in which the olive flourishes, and had no appearance of having been previously disturbed. The wood was quite sound, and I obtained a piece of it, which I still retain. In this case the accumulation of soil was not so great as in the last case cited, but it was still considerable, 15 feet of solid or semi-solid matter having been deposited since the tree grew in that spot. In visiting the ruined temples of Egypt, I found numberless proofs of this gradual accumulation of solid matter. The temple of Denderah is partially buried, and a view of the outside confirmed my opinion that the dry portions of Africa are not exempted from the operation of this general law.

In riding round the great temple of Karnack, I noticed that in many parts a considerable accumulation of soil had taken place. On the island of Philæ, near the line between Egypt and Nubia, is the temple of Isis, and there also I observed the same appearances, though that temple is of comparatively recent date, having been commenced by Ptolemy Philadelphus about 2,200 years since. In none of these temples could be discovered any traces of volcanic

* This fact, and a few others, have been added to this lecture since its delivery.

action to account for this invariable accumulation of soil. But not to one district or one country are such evidences of the increase of solid matter confined. When I visited Ephesus, and examined the ruins which Mr. Wood, under the auspices of the British Museum, has lately been exploring, I found in many places an accumulation of from 10 to 20 feet of earth. At Jerusalem, I found the walls in some places covered to a depth of from 50 to 60 feet. The foundations of ancient Tyre and Sidon are nearly buried.

Since my visit to Rome in 1873, twenty-six feet of accumulated earth have been removed from the Coliseum, and nearly the same from the Roman Forum. At the ruins of Nimes, in Southern France; at Italica, in Southern Spain, and numerous other places in the New World, as well as in the Old, I have observed the same accumulations. But, to come nearer home, we have similar evidences presented to us in every county of England. Stonehenge is a well-known example, where the Druidical stones are all deeply embedded in the soil, and coins are often found deep in the earth. Just before the delivery of this lecture I received a piece of petrified oak which has been found in excavating for the Metropolitan Railway. It was found at no less a depth than thirty-six feet under the surface. But the shortness of time, and the necessity of overtaking the remaining parts of our subject within the limits of the present lecture, forbid our lingering longer on this interesting feature.

It is not my province in the present lecture to enter minutely into a consideration of the rocks, stratified and unstratified, fossiliferous and non-fossiliferous, which compose that part of the earth's crust with which we are acquainted. The classifications of different geologists are more or less elaborate, according to their various fancies and predelictions; and all classifications are, to a large extent, arbitrary in their divisions and nomenclature. In my humble opinion, the geological classification propounded by Sir Charles Lyell, Bart., Fellow of the Royal Society, is the most correct and satisfactory of all the numerous systems and unsystematic theories that have been printed. Nevertheless, this view of the subject undoubtedly opens up a wide question which must be treated of fully elsewhere; but as illustrative of the early conditions of vegetable and animal life on the globe, it demands some part of our attention here. The whole of the deposits, subsequent to the Cambrian inclusive, are of sedimentary origin, and stratified; and all, with perhaps the exception of the Laurentian, are found to contain organic remains.

In the primary or unstratified formations no organic remains are discernible; and it has been somewhat rashly inferred from this that we have here data for fixing the advent of living organisms. When, however, we reflect that these granitic deposits have undergone a variety of violent processes since their first formation, it will be discovered that the assumption that living organisms did not then exist, because no discernible traces of them have been left, is not only unwarranted, but rash and untenable. These primary deposits were, in the first place, subjected to pressures so inconceivably vast, that these, of themselves, might be held accountable

for the obliteration of all the evidences of organic remains; but this is not all—for they subsequently came under the action of intense heat, which reduced them to a fluid state, and left them on cooling, in the condition we have them at the present day. Granting this, it ought not to be wondered at, that all traces of fossiliferous remains have been effaced in these earlier formations; and we therefore dismiss as idle, the assumption that no life existed prior to the depositing of the earliest fossiliferous strata. The requirements of nature demanded the aid of every possible solidifying influence; and the appearance of animal life is doubtless coeval with the appearance of water itself. Pre-terrestrial life was composed, of course, entirely of aquatic specimens—animal and vegetable—the former consisting of fish proper, crustaceous, aquatic reptiles, and some mamalia: and the latter, of different varieties of marine plants. On the appearance of dry land, through the agencies of subterranean forces, the highly surcharged, carbonaceous state of the atmosphere would be found eminently favourable for the propagation of certain classes of vegetation. The same conditions were, however, inimical to animal life, from the superabundance of carbonic acid gas; and it was only after long ages of what is known as the carboniferous era, in which vegetation of a wonderfully luxuriant character flourished, that the world became fit for living, breathing animals. The marvellous beauty of this arrangement can hardly be unnoticed by the most superficial observer. Here we have the condensation of gaseous matter going on more vigorously than ever; and in doing so this rank vegetation is gradually withdrawing the carbonic acid gas from the atmosphere, so as to purify it as it were for the reception of animal life, while, on the other hand this same gas is being carefully conserved, packed and stowed away in the great carboniferous deposits, to be long afterwards drawn upon at will by Man. When the atmosphere had been sufficiently cleansed for the purpose, it gradually attracted, more and more, certain hardy denizens of the deep; and through the course of long ages, first amphibious, and afterwards purely land animals appeared and occupied the dry land. The first plants grew to an enormous height, no doubt owing to the abundance of bulk-forming material in the air; and for an analogous reason, doubtless, the first land animals also appear to have attained to sizes far exceeding any specimens of the present day.

Thanks to palœontological research, we are sufficiently familiar with the appearance and structure of many now extinct animals of that remote period. We do not, however, find specimens of the human type, and we must conclude, therefore, that as such Man did not exist until within a comparatively recent period. That the progenitors of the human race incipiently existed as a distinct species seems undeniable; and it is equally certain that this species was endowed in a high degree, above all other animals, with germs of perfecting progress and development. To have attained to so high a pitch of perfection argues a vast period of time, over which the perfection has been going on; and it is, therefore, generally accepted by the scientific mind as ascertained, that long prior to the car-

boniferous era many progenitors were inhabitants of the deep. There is nothing shocking in this, except to narrow, warped, and prejudiced minds.

Moreover, the hypothesis is almost taken out of the region of conjecture by a close examination of the human body at the present day. A magnifying glass will reveal the fact that the skin is covered with minute scales, and in some young children may be seen, from one-half to three-quarters of an inch behind the lower portion of each ear, two small orifices, which are doubtless aborted visceral clefts, once used for breathing water. These orifices are the same on each side of the neck, thus showing their organic origin; and in some individuals they are large enough to admit a No. 6 probe from one to two inches in depth.

Man has always existed as a separate species; but with him, much more than in any other case, there has been a greater crossing of varieties, which is, beyond question, the most powerful agency for the improvement of species.

Having now arrived at and considered Nature's great masterpiece—Man, we shall draw this lecture to a close with a few brief speculations respecting the future of our earth. Having seen that there exists at present as much gaseous material around the earth as would serve to make another world of the same size, we may conclude that operations will go on very much as hitherto, until this surplus material is condensed into soil and rocks. Doubtless, long ages will elapse after the extinction of land animals and vegetation, through the atmosphere having become exhausted before the sea, and with it marine organisms, cease to exist. As already observed, we have in our moon a very likely prototype of the state of things to which we are tending; and as we have come to the conclusion that matter is indestructible, it is not irrational to predicate that the destruction of the earth, to which so many pin their faith, will, if it ever comes to that, simply consist of the resolving of all earthly matter into its original elements. This, in its turn, may be succeeded by a repetition of the slow solidifying process once more, and so on *ad infinitum*. But as at the commencement of this lecture we deprecated as useless the attempt to carry our minds back too far into the past, so, for exactly the same reason, do we desist from useless speculations regarding too remote a future. We may rest assured that this smiling earth of ours will last as long as there are useful purposes to serve; and that it will yet produce abundant harvests of spiritual and mental culture in developing the body, intellect, and soul of Man.

Meanwhile the God of Nature is writing the history of His handiwork, day by day now, as he has been doing for countless ages that have passed away. The majesty and completeness of the work are becoming more and more apparent as the perfection of soul-being is more closely approached. In this great work we may read the character of God himself in all its incomprehensible grandeur and sublimity; and we, the tiny offshoots of His mighty spirit may well resign ourselves unreservedly—as a child in the arms of its father—to await the future he has prepared for us. It were blasphemy indeed to doubt the issue.

PRESS NOTICES

OF

NATURES'S REVELATIONS OF CHARACTER.

"His design has nothing absurd in itself. He has no special craze that we can discover, and he can even talk of his undertaking in a manner not inconsistent with his knowing how to set about it. He states in effect that every feature of a human being has a history and meaning of its own—if we could only find them out—which is quite true; that certain rough inferences, founded on this belief, are already acted upon to some extent by mankind in their dealings with one another, which is also quite true; that a special aptitude for making such inferences, in other words the gift of reading character, is of great use to those who possess it, which is also true; and that knowledge of this kind is capable of being made scientific, which we think is also true. We can see no reason why physiognomy should not some day become a definite and useful branch of the science of human nature."—*The Saturday Review, London.*

"Observant men in all ages have noticed a certain correspondence between the configuration of living beings and traits of character or disposition possessed by them; and that this correspondence should receive its highest expression in humanity is only what might be expected. Yet it cannot be denied that the subject is of importance. . . . It contains evidence of shrewd observation on the part of its author, with anecdotes, and copious illustrations of the subject-matter, by the portraiture of individuals more or less well-known."—*The Lancet, London.*

"Dr. Simms is known as a most skilled practical physiognomist, and the experience of such a man, unfolded in the book, will be appreciated by many."—*Pictorial World, London.*

"This is one of the most important contributions to the science of physiognomy which has appeared for many years. It records many hundred useful observations, illustrated by a large number of woodcuts. It is popular and simple in style, and well worth its cost."—*The City Press, London.*

"The author is a great observer and a great traveller, well versed in science in its various departments, and is known as one of the most interesting lecturers we have. There is nothing in this book which offends against good taste. It is a harmless as well as a valuable contribution to literature, and one which should be in the library of every student of human nature, every phrenologist and physiognomist."—*Human Nature, London.*

"Has devoted twenty years of his life to the study of physiognomy, and for this purpose has travelled over all parts of the United States, and over most of Europe. He has produced a book embodying the result of a vast number of observations in that universally useful science, physiognomy. The result is a pleasant book, which will amuse, instruct, and enlighten the mind, and purify the affections."—*The Rock, London.*

"This work embraces a wide range of interesting topics, and contains about 300 engravings illustrative of physiognomical phenomena. The author attaches great importance to the selection of food and drink, which he believes exert an important influence on the formation of character."—*The Temperance Record, London.*

"This book is much more than a mere treatise on physiognomy. It recognises the truth too long ignored by the quacks who have dealt with the subject, that the whole of the parts of a compound organism, such as man, are in direct intercommunication, are mutually dependent, and are each indicative in measure only of the temperament and character of the individual. Hence physiognomy is dealt with by Dr. Simms in close connection with animal physiology, and there is no attempt made to sever what are naturally bound together. Not only is the basis from which the writer starts the true one, he deals throughout wisely with his subject."—*The Edinburgh Evening News.*

"We have now before us a work treating not only of noses and other features of the face, but of the whole human frame. He regards the bodily frame so correlated to the mental and moral constitution of man, that, if properly considered, it may always be found to afford sure indication of what that mental and moral constitution is. It would unquestionably be of great importance for any man to possess this power of thus estimating the characters of all around him, and might be the means of securing safety in business transactions. We have had much pleasure in reading Dr. Simms's book, and in looking at the many engravings with which it is illustrated. There is in the book unquestionably much of original and curious observation."—*The Edinburgh Courant.*

"We all receive impressions, favourable or unfavourable, from the faces we meet, and yet, with this general belief in the indication of character by the face, there are few who take the trouble to become acquainted with the principles which underlie the science of physiognomy. We are glad, therefore, to see a work on the subject by Dr. Simms, in which, while treating the subject in a scientific spirit, he seeks to make it sufficiently popular to interest the general reader. The style is good, the composition simple, and the meaning clear."—*The Hamilton Advertiser.*

"Will go farther to establish the truth of physiognomy than anything else."—*The Scotsman, Edinburgh.*

"This work, whilst a treatise on physiognomy, is something far more: it embodies the result of nearly twenty years of study and observation by the author. This we may say, the student of anatomy would learn much from Dr. Simms. With an industry, which it is to be hoped the sale of this book will amply repay and reward, the doctor has taken his subjects for illustration from every quarter of the globe, and not only from man, but also from members of the brute creation."—*The Temperance Star, London.*

"There is so much ability, so much that is estimable and worthy of note, the book is certain to provoke discussion, and arouse an extensive interest."—*Brighton Daily News.*

"His book is enriched with fully 270 engravings, which illustrate the text, and the text them,

and teach much which it would be well for all to know. Many of the illustrations are likenesses of celebrated characters, curious, rare, and valuable in themselves, apart from the lessons they are made to teach by the author. The work is in many respects peculiar, and in several ways valuable. To all who wish to study and understand the human nature which passes before them daily, we can, with all confidence, recommend Dr. Simms's volume."—*North British Daily Mail, Glasgow.*

TESTIMONIALS OF THE PRESS OF BRITAIN WHERE DR. SIMMS HAS LECTURED.

"Lecture.—Last night Dr. J. Simms, New York, delivered the first of a series of lectures on 'Physiology and Physiognomy,' in the Masonic Hall, which was crowded to excess, the audience including many ladies. For fully an hour the lecturer discoursed on 'Physiognomy,' adding interest to that subject by practical illustrations on persons from amongst the audience, the "reading of whose characters was at once striking, instructive and amusing. The remarks of the lecturer were further illustrated by numerous diagrams, and paintings which were hung on the walls."—*The Edinburgh Courant.*

"Lecture.—Last night Dr. J. Simms concluded a very successful series of lectures in the Masonic Hall. At the close, the lecturer was awarded a hearty vote of thanks."—*The Edinburgh Courant*, July 12th, 1873.

"Physiognomy.—Last night Dr. Simms, the American Physiognomist, delivered the last of a course of nine lectures on the above subject, in the Freemason's Hall, George Street. During his visit to Edinburgh he has been attended by considerable numbers of people, who desired to have the opinion of an expert as to their capabilities, character and disposition. The lecture last evening was delivered to a crowded audience."—*The Daily Review, of Edinburgh.*

"Lecture on Physiognomy.—Last night Dr. J. Simms, the well-known, eloquent and amusing lecturer of New York, delivered an address in the Masonic Hall, George Street, on Physiognomy, or Nature, Mind and Beauty. The hall was crowded to excess. The main object of the lecture was to shew that a close connection might be traced between physiognomy and character. This address was in several particulars sufficiently amusing, and was well received by the audience."—*The Scotsman, of Edinburgh.*

"Popular Lectures.—Dr. J. Simms. of New York, delivered the closing lecture of a series of nine lectures in the City Hall, on Physiognomy, Physiology, Geology, &c., on Saturday night last. The lectures have been very successful. The closing remark that the Doctor intended to visit Glasgow at some future time elicited repeated applause.—*The Evening Star, of Glasgow.*

"Scientific Lectures.—Last Saturday night Dr. Simms, of New York, delivered the last of a series of nine lectures on Physiology, Physiognomy, Geology, &c., in the City Hall. Large and intelligent audiences have attended the lectures, which have been highly successful. The closing remark of the Doctor, that he hoped to revisit Glasgow at some future day, and deliver another course of lectures, was greeted with applause."—*The North British Daily Mail, of Glasgow.*

"Dr. Simms in the Lecture Room.—Dr. Simms, the well-known author, and physiognomist, who has lectured nightly during the past fortnight, in the Lecture Room, Nelson Street, on 'Physiognomy and Signs of Character,' and other subjects, has met with a large and well-deserved amount of recognition from the public. The Lecturer treats his subjects in an able and interesting manner."—*Newcastle Daily Journal.*

"Dr. Simms's Lectures at Westbourne Hall are a decided success. We have never seen this Hall so crowded as on Tuesday last, when this popular lecturer delivered his truly popular lecture on Physiognomy and Physiology. To all desirous of passing a really intellectual and interesting evening we would advise a visit to Westbourne Hall."—*W. London Times.*

"Dr. Simms at the Victoria Hall.—During the week Dr. Simms has again favoured the inhabitants of this borough with several very instructive lectures. On Wednesday evening the lecturer gave explanatory instructions upon the science of physiognomy, and by diagrams exhibited comparisons between the intellectual and the debased types of mankind, giving his hearers abundant hints so as to enable them to judge characters from facial development.—*The Sunderland Times.*

"Scientific Lectures.—For several successive evenings Dr. Simms has been lecturing in the Music Hall, Albion Street, upon Physiognomy, Physiology, and kindred sciences, to large and deeply interested audiences. The system of Physiognomy that the Doctor presents is new and true to nature, being based on observation and reason applied to animal and human life. The quiet humour that pervades each lecture, together with the reason adduced, will well repay attending the lectures. The vast collection of portraits in oil are the finest and most extensive that have ever been exhibited in Leeds by any travelling lecturer."—*The Leeds Daily News, Oct. 6th*, 1873.

"Scientific Lecture in Leeds.—During several successive evenings Dr. Simms has been attracting large audiences at the Music Hall, Albion-street, with lectures on Physiognomy, Physiology, &c. The Doctor is a lecturer of twenty years' experience, and this, together with the extensive apparatus with which the lectures are illustrated, makes them at once instructive, entertaining, and elevating.."—*Leeds Mercury.*

Scientific Lectures.—For several successive evenings Dr. Simms has been lecturing in the Music Hall, Albion-street, upon Physiognomy, Physiology, and kindred sciences, to large and deeply interested audiences. The system of physiognomy that the doctor presents is new and true to nature, being based on observation and reason applied to animal and human life. The quiet humour that pervades each lecture, together with the reason adduced, will well repay attending the lectures. The vast collection of portraits in oil are the finest and most extensive that have ever been exhibited in Leeds by any travelling lecturer."—*The Leeds Express.*

NATURE'S REVELATIONS OF CHARACTER;

OR PHYSIOGONOMY ILLUSTRATED.

By J. Simms, M.D.

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HEALTH AND CHARACTER

WITH

DIRECTIONS FOR THEIR IMPROVEMENT.

BY

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Author of "Nature's Revelations of Character," A Large Work on Physiognomy, "A New Physiognomical Chart," Several Scientific Lectures, &c.

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His design has nothing absurd in itself. He has no special craze that we can discover, and he can even talk of his undertaking in a manner not inconsistent with his knowing how to set about it. He states in effect that every feature of a human being has a history and meaning of its own—if we could only find them out—which is quite true; that certain rough inferences, founded on this belief, are already acted upon to some extent by mankind in their dealings with one another, which is also quite true; that a special aptitude for making such inferences, in other words the gift of reading character, is of great use to those who possess it, which is also true; and that knowledge of this kind is capable of being made scientific, which we think is also true. We can see no reason why physiognomy should not some day become a definite and useful branch of the science of human nature.—*The Saturday Review, London.*

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[*Continued on 3rd page of Cover.*

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A RECORD OF THE HEALTH & CHARACTER

of M.....

MARKED BY J. SIMMS, M.D.

.....

N.B.—This book is intended only for whom it is marked; his or her state of health and how to improve it; or the manner of regaining it if lost. It points out also the weak traits of character and the best means of strengthening them; the excesses and the modes of repressing them. The pursuit for which a person is by nature best adapted; the conjugal or matrimonial partner most suitable to conduce to happy results, &c.

By exercise increase your respiration, and sponge the whole body frequently with cold water, if you have animal heat enough to endure it; but if you are cold and weak use tepid water. This will cause your skin to assume a healthy colour as well as remove stiffness and erruptions from it. To the same end, if your skin seems out of order avoid animal fat of all kinds, sweets, stimulants, and use chiefly fruits and vegetables.

Ride on horseback an hour daily, if possible, and frequently take pedestrian trips into the country; clamber up the hills and mountains; dance, run, and roll about with your dog; avoid too close study, and shun the debauchery of sloth and inaction. Remember the physical laws of God are as sacred as the moral, and must be kept inviolate, in order to make your blood pure, and impart tone and vitality into the solids of your organisation.

Your dress regulate with reference to health and comfort rather than appearance. Do not make yourself a peripatetic museum of fashionable costumes. Remember that thin shoes help you on most rapidly to an early tomb. Many a man has taken cold by changing his boots for slippers on entering his home, and the cold has become a fever and ended his days. Underclothing, whether woollen, cotton, linen, or silk, should be white, because it does not radiate the heat like colours, nor does it contain poisonous matters, as some colours do, to the great injury of the constitutions that are susceptible in this respect.

Sleep, take as much of this real balm as possible, and if you are wide awake you must keep your mouth closed, especially when sleeping, both to prevent nightmare, and because the mouth, more rapidly than the nose, inhales poisonous vapours and exhalations. If you are liable to somnambulism, eat something light before retiring, and as far as possible rub yourself all over with your hand, or a flesh brush. Adopt the practice of Dr. John Hunter, the celebrated Scotch surgeon, whose practice was to indulge in half an hour's sleep daily after dinner. Dr. Willard Parker, a talented surgeon of New York, allows nothing to prevent his sleeping one hour after dinner. Reader! do thou the same. If your stomach is weak sleep in a reclining posture in a soft, large arm chair. Those who have strong stomachs experience no inconvenience from a recumbent posture. Dr. Abernethy, the famous physician to the Prince of Wales, always threw himself on the hearthrug for a snooze after dinner, and refused even to his Royal Highness to elevate himself until he completed his siesta. But remember to allow no new pleasing thoughts to fascinate you before bed hour.

Overwork and constant thought must, if possible, be avoided, the cowardly rascal disease seizing first and chiefly the weak parts of the body, to preclude which you should endeavour to keep every organ, but specially the blood itself, in a strong and vitalised condition. If your memory begins to fail, your strength to decline, your mind to wander, change your place of residence and mode of living; take a lesson from migratory birds; seek a cooler climate in summer and

a warmer in winter; eat and drink what you find agrees best with you, and you will find your symptoms more tending towards soundness and health.

Cultivate kind and virtuous dispositions. Bear in mind that the possession of fear and anger weakens the heart, deranges the nervous system, impedes perspiration, hinders the proper action of the bowels, and prevents healthful secretions and excretions throughout the entire frame. With an adamantine will determine to gain a perfect command over your angry passions; resolve to conquer every fear, and allow no animal passions to burrow within. As strenuous exertion is required to break an ugly colt, so does it demand unyielding resolution to manage a fractious spirit. Sadness banish, but hope and joy cultivate, for these exert a pre-eminent power in preserving health and longevity as well as on wordly prosperity and advancement. The cause of life-force is, however, cheerfulness, and also its consequence, and will be promoted by all the means already mentioned. To these may be added, although already implied: keep much in the sunlight; avoid dark, dank and ill-ventilated places, eschewing all useless demands on the vital forces, and cherishing the hope of a happy immortality. So may health shed its ennobling influence over many years of useful and health-inspiring life.

B. As no one suffers from an over-abundance of health, except those who abuse it for immoral purposes, it is unnecessary to give directions for its restraint. The abuse of such a blessing is a transgression against all law, human and divine.

FACIAL MANIFESTATIONS OF THE FIVE FORMS.

That part of the following face indicated by No. 1, is the facial representation of Form I., or the Abdominal Form.

The space enclosed on the face by the line, and marked 2, indicates Form II., or the Thoracic Form.

That portion of the face marked 3, represents Form III., or the Muscular and Fibroid Form.

Form IV., or the Osseous or Bony Form, is evinced by the size of that part of the face enclosed by the line, and marked 4.

The figure 5 indicates that portion of the head and face above the line where the Form V., or Brain and Nerve Form, is most apparent.

The above explanations apply to the cut on the succeeding page.

I.—ABDOMINAL FORM.

Large abdomen, wide mouth, round chin, puffed cheeks and lower face, abundance of soft flesh, sleepy-looking eyes, slow movements.

1. Nearly devoid of vitality, yours is a thin skeleton.
2. Are liable to wear out prematurely.
3. Possess some, though an insufficient stock, of life-power.
4. Lack flesh and blood, and are weak in digestion.

5. Dinner is not what you worship.

6. Your nutritive and digestive forces are sufficiently capable of furnishing a fair amount of nourishment.

7. Have vital juices required for ordinary exertion.

8. Are well supplied by the nourishing apparatus.

9. With good assimilative organs and appropriative powers.

10. An abundance of vitality gives you a plump appearance.

11. Have a strong excernent system.

12. So thoroughly ventriquose and fleshy you are that you can only feel gratified when your full nature is at ease. Are likely to die suddenly from apoplexy, as did Don Alfonso VI. of Spain. In size you somewhat resemble Mr. Bright, Daniel Lambert, of England, and Mrs. Rohm, of America; the first died in his thirtieth year; the second died early; the last died at Baltimore, aged 29 years. Their weights were 648, 739, 583 pounds, respectively.

A. Take care to masticate slowly plenty of plain, easily-digested food, and wash it down with plenty of water. After meals, throw yourself into an easy chair, with your feet raised, and induce sleep; or, better still, lie down to rest, and take it easy. All slim literary men especially require to let the system often fall into a state of repose. When a child's abdomen is relatively small and weak, restrain and curtail his studies, and all exercise of a violent character; but stimulate the eating and drinking tendencies. Avoid everything that interferes with the cultivation of good temper. Keep the mind serene and free from disturbing passions. Attending to these hints, Nature will round out your slight figure and abolish the straight lines and angles of your form, giving as much of the abdominal form as is necessary for the equalisation of your faculties.

B. Keep your mouth closed, your eyes and ears wide open; restrain yourself in eating and drinking to the utmost point, short of imitating the Frenchman's horse which just died on attaining to the point of living on one blade of grass *per diem*. Avoid milk, beer, eggs, sugar, and butter, as well as all oleagenous and carbonaceous substances. But eat fish, boiled fowl, vegetables, fruit, and bread, with water only for your drink. Work earnestly with both limbs and brains; cultivate the society of lively, active, sprightly persons, who will, by the power of sympathy, assist in overcoming the torpor of your mind. Like Cobb, the famous pugilist, exercise as he did when he went to Scotland to fight Molyneux; or, as Captain Barclay, who steamed off 33lbs. of his carcase in a walking match of 1000 miles. A Leith merchant climbed every morning to the top of Arthur's Seat, a hill 822 feet high, about 3 miles from Leith, and thus succeeded in reducing his corpulent physique. Doctor Cheyne, of London, got rid of 140lbs. of flesh, and lived to a good old age, by restraining his appetite and taking a good deal of exercise. Let these be your encouraging examples. By such means you will not only reduce superabundant flesh, but you will improve the beauty of your person, and if to these moderatives you add friction of your body, it will greatly help the desired reduction, and at the same time preserve you

from gout, rheumatism, and apoplexy. Your secretions will be duly proportioned, fatty redundency removed or prevented, your skin rendered smooth and elastic, and your complexion will become soft, clear, and wholesome.

II.—THORACIC FORM.

Large chest, nostrils capacious, cheekbones prominent, throat full, while the abdomen and brain are comparatively small.

1. Having such poor respiratory powers you inhale so little air that you could hardly be drowned. Hence the circulation of your blood is so languid that your energy assimilates itself to the snail and sloth type. Hence your timidity and lack-a-daisical passiveness.

2. A cold, torpid, absorptive nature, you generate little warmth, and constantly take cold, and are thus unprotective and deficient in energy.

3. Are deficient in circulation and respiration.

4. You breathe too much with the top of the lungs, and not sufficiently to give strength to the entire system.

5. A sense of exhaustion often steals over you; the lungs are not very strong.

6. The warlike tendency is not a controlling impulse in your nature.

7. Are well equipoised between listlessness and intense ardour.

8. Have fair respiratory and circulatory powers.

9. The element of air enters largely into your system.

10. Your respiration is deep, full, and invigorating.

11. In one with your strength of heart and lungs, all deleterious gases are highly inimical to life.

12. You breathe much, and have an immense amount of red corpuscles in your blood, and are consequently full of vigour.

A. Run, ride, row a boat, climb hills, mountains, and church steeples. Dr. Baynard, of Bath (England), had weak lungs, and, living on low ground, he became consumptive, if not in confirmed phthisis; but he cured himself and became, at least in this respect, strong and healthy by almost constant riding. Fly, then, from the sea-level and seek the mountain heights; walk erect; use both bathing and friction of your chest, and it will as certainly expand as any effect will follow its cause. Read aloud an hour every day; sing, if you have any ear for music, and breathe deeply all the air you can. Use dumb-bells, play at shuttlecock if you can get an antagonist, and fight your own shadow rather than remain passive.

B. The very intensity of the fires within you may destroy the life they were intended to preserve. If, therefore, you are too energetic, burning up too much material through the size and powerful action of your lungs and heart, live much within doors, creeping into the cellar rather than up to the garret; compel yourself to sit still for some time daily, and prosecute intellectual studies. Eat heartily, chiefly vegetables, avoiding animal food and fermented liquors. In

vite sleep, and shun all occasions of excitement; but especially keep away from the activities of war, and whatever and every kind of strife.

III.—MUSCULAR AND FIBROUS FORM.

This type broad rather than tall, the neck short, the forehead low, the nose flat, the ear short, the eyes prominent, the wrinkles on the face deep and perpendicular.

1. There is scarcely any muscle in your frame; harmless as a butterfly, useless as last year's rainbow, you would not kill a flea or outrun a snail if you could help it, but would yield to every whim of everyone rather than make the least exertion—laziness personified.

2. Your limbs are very weak and feebly braced; the good Lord only knows for what you were formed; easily wearied, always sighing and groaning, weak and spasmodic in all your movements.

3. It requires effort for you to labour.

4. Have some strength, though too little for great effort.

5. Where physical power alone is required, you cannot excel.

6. Possess sufficient muscular power for ordinary undertakings.

7. Have a fair amount of muscle.

8. Can work and accomplish quite well, or strike a severe blow.

9. There is an excellent share of vigour in your muscles.

10. Are capable of much physical exertion.

11. You possess wonderful muscular strength.

12. A Hercules in bodily power and self-will. You closely resemble, in this respect, Topham of England, and Giovanni Baptista Belzoni of Italy, who were remarkable for their physical strength.

A. The grand remedy is exercise. Take it early in the morning, say from 6 until 7 in summer, and as early in winter as it is light. Let it be walking, riding, running, jumping, fencing, using dumb-bells, lifting, or playing at any active game. Sponge yourself from head to foot with cold water the first thing every morning, then rub the skin quite dry, and brush it thoroughly until it glows. Take plain food, and avoid all kinds of pastry and confectionery, such as pies, puddings, preserves, pickles, and sweetmeats. Let no day pass without spending some time in the open air, but allow yourself rest sufficient. Cyrus understood the secret of muscular strength when he made it a law among the Persians that no one should eat except after labour. If you become too thin under this regimen, exercise less.

B. Few men or women in this degenerate age have more muscle than brain or body in proportion, and of all the forms this is perhaps the least likely to require restraint. But you may have been a person strong to labour physically, and innured to earn your bread by the strength of a pair of brawny arms; and you may have been left a fortune, or from other circumstances may deem it desirable to become softer, more refined, and intellectual. If so, you have but to reverse the regimen prescribed above under A. Exercise little, devote yourself to reading and thinking, and seek recreation in those lighter pastimes which demand nicety and delicacy rather than strength.

IV.—OSSEOUS OR BONY FORM.

Shoulders and cheek-bones square, hollow or flat temples, knees, wrists, and knuckles prominent, figure generally, but not always, tall.

1. An insignificant looking little mortal, as restless and unstable as a leaf driven by the wind, you are given to trifling pursuits and "pernickety" ways.

2. The small size of your frame indicates dwarf-like bones.

3. Very little exertion wearies you.

4. Finely moulded, and dislike the coarse drudgeries of life.

5. Are more graceful than enduring.

6. Have a fair framework.

7. Your osseous structure is sufficient to sustain you in ordinary efforts.

8. Excellent bone structure.

9. Can use your framework to advantage.

10. Have considerable endurance.

11. Are determined and inflexible in your general intentions.

12. Great, solid bones in your frame enable you to endure, while they give you remarkable steadiness of purpose.

A. Exercise yourself much, but not to excess, in slow, heavy labour, performed in sunlight. That this developes the bones may be witnessed in the hands and bones of every labourer accustomed from his youth to heavy outdoor employment. Men born and reared in London, Glasgow, Manchester, and other large cities, especially manufacturing towns, are usually short, small-boned, and very often bandy or calliper-legged. These defects arise from the sun being so much obscured by the smoke and fog that the bone growth is retarded. For similar reasons there are more cripples and persons of stunted and crooked growth in London, Glasgow, Manchester, and Copenhagen, than elsewhere in Britain or Europe. These cities, from their insular position, mostly near the sea, have many cloudy and rainy days; besides being so densely built and smoky as materially to intercept the rays of the sun. Hence the bones of the inhabitants born and grown in those cities are generally small and weak, the spines and legs apt to grow incurvated and crooked. All nocturnal animals have relatively small bones, as the fox, coon, opossum, &c., that prowl about chiefly after sunset. So are such specimens as the burrowing animals—the rabbit, marmot, mink, musk-rat, beaver, common rat, mole, snake, eel—all of which are more or less hid from sunlight a great part of their time. If you are too rich or too lazy for manual labour, or engaged in a sedentary pursuit, ride on horseback through the open country, leaving all sunshade at home, and receiving the full blessing of the sunlight. And the advice is—use chiefly vegetable and farinaceous food; this contains lime and the phosphates necessary to the formation of bone, whereas animal food contains little or no bone material. The largest animals are vegetarian; while the carnivorous, as the lion, tiger, lynx, &c., secure bone material by crushing and devouring the bones as well as the

flesh of their prey. Those races of the human family that subsist almost wholly on fish and meat, as the Esquimaux and Lapps, are short and small-boned in comparison with the Russians, Swedes, and Norwegians. Drink calcareous water. Avoid everything that tends to chill the body or impede the circulation, such as damp, cold, or dark rooms, thin cotton or linen clothing, light shoes, and tight dresses, and maintain a free circulation of the blood with fair natural warmth.

B. If your bones are becoming large, and your brain and nervous system poor, as is evinced by dulness of apprehension and want of sensitiveness, forego both walking and horse-riding, perform your locomotion in a railway; sit and study much in shady places. If you ever do exercise, let it be in some light, active work or games, with lively, small-boned, talkative companions; attend theatres, lectures, and exhibitions where brilliant scenes are witnessed and excitement abounds. Visit museums and art galleries, devote your leisure hours to reading, and if you walk out, let it be after sunset. Thus may you quicken the sensational part of your system, and check an excess of bone growth.

V.—BRAIN AND NERVE FORM.

Relatively large head, spare pyriform face, slender neck and body, quick nervous movement, rapidity of speech, hungry look.

1. Almost entirely devoid of sensation.
2. Have an apathetic and callous nature.
3. Are not acutely sensitive to pain or pleasure.
4. You possess more physical strength than power to feel.
5. Not inclined to a purely mental pursuit.
6. Have a fair degree of feeling.
7. Your sentient system is quite under the control of your will.
8. May enjoy mental labour in a tolerable degree.
9. Have a well developed nervous system.
10. Are a constant thinker.
11. Your brain is relatively large and has great power.
12. The very best material enters into your brain and nerve structure, and you have exceedingly rapid and intense activity of the nerve force, which makes you very sensitive. You can ably produce and maintain the heat of the body, and are well adapted to resist the depressing action of cold.

A. The functions of the brain and nervous system are liable to suffer on the one hand from luxury, especially in eating and drinking. The great authors of past centuries, the thinkers whose works have immortalised them, were saved from being gormandisers by the poverty which was generally their lot. From overwork, on the other hand, the brain may suffer; the fibres, like over-screwed strings of a musical instrument, give way, as in the case of the celebrated geologist, Hugh Miller. Therefore, if you are deficient in thinking power and wanting in sensitiveness and susceptibility to the higher class of

emotions and impressions, eat sparingly of plain food, especially avoiding heavy suppers. Secure a proper amount of sleep, and force yourself to study something for some hours daily. Select whatever you are likely to become most interested in, and persevere in applying your mind to it until application becomes no longer difficult. The fruits and cereals, especially oats in the form of meal made into porridge or cakes, are better for sustaining mind power than animal food.

B. If, on the other hand, you are too susceptible, too imaginative, too thoughtful, or have injured your nervous system by overwork, you must devote yourself to physical labour, and cut off some hours from your intellectual exercises. Keep as much as possible in the open air, and eat sufficiently of whatever you find digestible. If there is any subject to which your thoughts are apt continually to recur and there to dwell until you become restless, agitated, and uneasy, force yourself to apply to some occupation or pastime that will divert you from such thinkings. Sleep, eat, exercise; but avoid sedentary and studious habits.

CLASS I.

SUPPLYANT POWERS.

RELISH FOR LIQUIDS.

1. You hate water as much as Diogenes did dishonesty.
2. There is very little liquid in your system, having slight or no fondness for it.
3. Are not particularly given to bathing or drinking.
4. Your system requires very moderate quantities of water.
5. Neither your thirst nor aversion for water is strong.
6. Are not a great water bird.
7. You have a fair desire for liquids.
8. Find pleasure in viewing the ocean, lakes, and rivers.
9. Moisture seems to agree well with your system.
10. The aqueous element is abundant in your organisation.
11. You have a natural relish for bathing.
12. None more highly enjoy water than you, either in scenery, ablution, or in imbibing.

A. Bathe often, imbibe frequently, visit water scenery, and use salt freely.

B. When you bathe use as little water as possible, and bathe as quickly as you can; consume less liquid; avoid soup, gravy, and salt.

DESIRE FOR SOLID FOOD.

1. Are greatly wanting in appetite.
2. You are an exceedingly small eater.
3. To eat seems more of a task to you than a pleasure.

4. Are more particular regarding the quality of food than the quantity.
5. Plain, cleanly food you may relish in fair quantities.
6. Have an appetite which is occasionally somewhat freakish.
7. You possess a happy balance in this faculty.
8. A good meal causes most of your troubles to vanish.
9. You relish your food, but are neither gluttonous nor fastidious.
10. Your appetite for food is vigorous, yet you can control it with the will.
11. Dislike to be stinted at the table.
12. Ever hungry, you need no dainties to whet your palate.

A. Think more of what you consume; eat often, take vigorous exercise in open air, and avoid excessive thinking.

B. Apply yourself to consecutive mental labour, and take only two moderate meals per day.

IMITATIVENESS.

1. Are an extreme oddity; you largely resemble Peter the Hermit of France, who instigated the first crusade.
2. Could never become a distinguished actor.
3. You possess very little capacity to work after a model; are deficient in the mimetic gift.
4. Somewhat, though not greatly, inclined to be conformatory.
5. Like to see other mimics, yet are not an adept at it yourself.
6. May not be able to produce a likeness of another; nevertheless, you are fond of the productions of art.
7. You are endowed with fair imitativeness.
8. Can imitate the useful.
9. Have good capacity in this faculty.
10. Are able to make the practices and opinions of others natural to yourself.
11. You enjoy buffoonery and burlesque.
12. In the use of this faculty you have few, if any, superiors.

A. Walk and talk like others; attend fashionable resorts; dress as nearly as possible like the prevailing custom; move in good society, and endeavour to be genteel.

B. Be yourself on all occasions; wear your clothes until they are worn out, regardless of fashion; strive to vary, modify, alter, and make something unmatched; act strangely, peculiarly, and unusually, until you establish an identity of your own; endeavour to become a reality instead of an imitation.

CLASS II.

PROTECTIVE ABILITIES.

FACULTY OF RESISTANCE.

1. In times of danger you flee away like a rabbit.
2. Others generally think you mild and inefficient.

3. Having little force, you go with rather than against the public will.

4. Peace loving and averse to severities.

5. Usually mild and gentle; but, if provoked, may become nervous and excited.

6. Admirably free from extremes in this faculty.

7. Intentional injuries you readily resent.

8. Enjoy living in peace, yet you manifest staunchness in defence of the right.

9. Opposition arouses your nature, and then you evince much spirit.

10. The more dangers thicken around you, the more fortitude you display.

11. Great is your self-possession in cases of extreme danger.

12. Courage and earnest opposition to what you deem wrong is your innate feeling.

A. Mingle with the world; let out your ideas and maintain them when opposed; grapple with difficulties and never shrink from danger; look the lion of enterprise in the mouth and maintain a bold front under all circumstances.

B. Evade all opposition, and never argue with any one; shun war and woo the peaceful; be more assenting, merciful, forgiving, and sympathetic.

SELF-ESTIMATION.

1. Are constantly abased and exceedingly humble.

2. The retiring modesty of your nature is apt to detract from your chances of success.

3. Have a moderate estimate of your own abilities.

4. Are neither arrogant nor presumptuous.

5. Your self-confidence is not strong.

6. Not assumptive, egotistical, pretentious, or imperious.

7. Have a fair share of independence.

8. An innate desire of yours is to maintain a commendable self-reliance.

9. You strive to place reasonable trust in your capacities.

10. Little mean acts you despise.

11. You foster a pride of ancestry, and delight in honourable thoughts and noble actions.

12. The true aim of your life should be to endeavour to become as truly great as you think you are.

A. Throw yourself upon your unaided resources; determine to be a leader in society; never condemn any of your acts as long as they bear the impress of right.

B. Let meekness and modesty be your aim; remember that the violet is far more lowly than the sun-flower, and much more admired; study out your defects, and no longer consider yourself infallible.

CLASS III.

PROPAGATIVE INCLINATIONS.

LOCATIVE HABITS.

1. Are nomadic and migratory in your habits and feelings.
2. Have an uneasy disposition and an intense passion for rambling.
3. You possess little or no attachment to place.
4. Are delighted with travelling.
5. Have more love for friends than for house.
6. Are fairly developed in this respect.
7. To you it seems pleasant to have a home, yet can leave it if necessary.
8. When having been away for a long time, it seems delightful to return to your birth place.
9. A strong natural tie exists between you and the land of your nativity.
10. It is very difficult for you to lead a homeless life; are eminently patriotic.
11. Have a strong aversion to migration.
12. You find extreme delight in a place of constant residence.

A. Buy a mansion and strive to have nothing in it except that produced or made in your own country; centre your thoughts on your home, and omit no effort to make it the most pleasant place on earth.

B. Travel, cast away prejudice, and endeavour to appreciate the beauties of other lands.

RECEPTION OF TONE.

1. There is no more music in you than in a brick. Should make all of your music with a music-box or by turning a hand organ.
2. Handel's "Jubilate," and "The Creation" by Haydn, seem much alike to you; would fail to appreciate those fine airs once so beautifully played by Rolla, Paer, Giretto, Spohr, Lafont, or Mayseder.
3. Are somewhat deficient in the soul of harmony.
4. Have an appreciation of excellent music.
5. Can sing if you have a good voice.
6. The incomparable singing of Jenny Lind Goldschmidt would please you, although you may not sing.
7. Possess fair musical ability.
8. With practice may perform on a musical instrument; your capacity to vocalise music depends upon your voice.
9. Simple melody elevates your mind and calms your ruffled spirit.
10. Good music has an irresistable force over your heart.
11. The most complicated harmony of the modern musician pleases your finely-susceptible sense.

12. Although you may not equal the reputed musical performances of Timotheus of old, yet you possess an ear of fastidious delicacy.

A. Do not wait for a master like Giardini, a Fischer with his hautboy, or a Crosdil with his violincello, to produce the genuine effects of music upon your ear; but listen to every tolerable harmony, or simple music, for which the present age seems to have little relish. Strive to practise music, and be patient as well as persevering, and remember that to attain superior excellence of rapid execution requires the unremitted labour of a life.

B. Cease singing, and learn that music, when pursued with intense ardour, has a tendency to totally enervate.

CONCEALATIVENESS, OR INCLINATION TO CONCEAL.

1. You keep nothing to yourself.
2. Are exceedingly outspoken and transparent.
3. What you know you are willing others should enjoy; you never seek for secrets.
4. Sincerity and hatred of deceit are your inbred traits.
5. The winding mazes of duplicity engender, as they deserve, your hearty contempt.
6. False display of candour and mean artifices to your nature are highly distasteful.
7. Not being secretive to dishonesty, or divulgent to simplicity, you may be considered well adjusted in this faculty.
8. You are capable of keeping a secret, and are not likely to betray a friend.
9. At times you appear a little mysterious and somewhat insinuating.
10. Have an excellent ability to keep a secret.
11. Your enigmatical and sly disposition is liable to allure you into the false belief that you know the secret motives of others while your own are hidden.
12. Cunning and low subtlety are so deeply rooted in your mind, that you entertain a mean opinion of those with whom you converse.

A. Talk little; have no intimate friend; keep on the alert; evade direct answers to questions; often quiz others; move in polite society, and assent to the opinions of those with whom you associate.

B. Abandon all society where calumny usurps the place of wit or instruction in the feast of conversation; never ask what was said of you by others; act out your true nature and appear only what you are.

CURVATIVENESS, OR JUDGMENT OF CURVES.

1. Forgetful of winding roads, turns, and crooked ways, hence you readily lose your way.
2. Have slight appreciation of rounded forms.

3. For curved outlines and the recollection of faces you possess little inclination.

4. Having an unreliable memory for faces, you will pass friends and acquaintances sometimes unnoticed.

5. Are fond of seeing beautiful forms and patterns, and the ever-changing aspects of nature.

6. Evenly balanced in this faculty.

7. Rounded and beautiful outlines excite your admiration.

8. The forms of faces, landscapes, and routes you generally recollect.

9. Have a natural aptitude for judging of curvilinear forms.

10. All natural curves, and windings of roads, rivers, hills, and mountains become strongly impressed on your memory.

11. Can recollect faces and curves remarkably well, and rarely, if ever, forget the route you have once travelled.

12. Possessed of a fine taste for art, ornamentation, and decoration.

A. Notice the configuration and outline of everything; endeavour to trace family resemblances and facial expressions; practise drawing and spelling; dispense with a guide; take a compass and strive to find your way wherever and whenever you travel.

B. Engage in an occupation where straight lines and angles abound; have a square table to eat or write on; use furniture in your house, wherein corners and plane surfaces are more numerous than rounding forms; cease drawing, and evade all art galleries, and at length those imaginary figures may disappear from your fancy.

ACCUMULATIVE FACULTY.

1. Are greatly extravagant and thriftless.

2. Nearly every enterprise of yours proves to be a failure.

3. Manifest little, if any, economy in financial transactions.

4. Slow to perceive opportunities for speculation.

5. Can comprehend the means of increasing wealth, yet are more theoretical than practical regarding gain.

6. Desire to make more than a living.

7. Being harmoniously balanced in this faculty, you worship neither indigence nor opulence.

8. Wish to be highly successful and flourish.

9. Circumstances must be unfavourable if you do not increase in worldly goods.

10. To prosper and thrive affords you great satisfaction.

11. Will strive to amass property, and to increase what you possess.

12. Thoroughly you know the ownership of the property you have gained.

A. Be industrious and saving; speculate and court healthy competition; study the natural laws of supply and demand; unite practical wisdom with your capital; and above all keep your armour bright with honesty and earnestness of purpose.

B. Think less of property, but more of your soul; cease trading, and devote your time to gathering valuable thoughts, and acquiring a noble way of thinking; cultivate commendable humility, and remember that without the higher virtues, such as liberality, respect, faith, honour, a cultivated mind, and good conscience, all worldly wealth is but a phantom.

MONOGAMIC LOVE.

1. Are unloving and unloved.
2. The tender passion of love has never been kindled into a flame within your bosom.
3. Bachelorhood or Spinsterhood would well accord with your tastes.
4. You often see those you greatly admire.
5. You may esteem the soldier armed for the battle, but you love him more when he is exhilarated by the scenes of domestic love.
6. Moderately inclined to manifest affection.
7. The tenderness of conjugal attachment you acknowledge and respect.
8. An innate love for one of the opposite sex is a leading feature of your character.
9. On such food as love a mind like yours can nourish itself.
10. Persons with such a strong monogamic taste usually become valuable members of society.
11. An exclusive devotion to the object of your affection causes you to enjoy caressing.
12. Deep and true affection constantly urges you towards higher perfection.

A. Protect with jealous care every tender tie; if you lose your object of love, lead such a virtuous and attractive life that another will love you; continue in loving and well doing; strive to imitate the devoted love Eleonora manifested for Tasso.

B. Endeavour to regulate your actions by philosophy; read tentative works and abjure fiction; bear in mind that love in excess ruins health and blights all prospects of becoming intellectually distinguished.

PERCEPTION OF COLOURS.

1. Are colour blind.
2. The mild shades of colour you fail to notice.
3. A fine form arrests your attention more readily than the most gaudy colours.
4. Find some interest in viewing fine flowers and beautifully blended tints.
5. Delicate hues and shadows please you.
6. With attention you are capable of judging decided colours.
7. Admire the soft and subdued tones and half tones in superior photographs.

8. A fair observer of well indicated lights and shades.
9. Take a great interest in coloured works of art.
10. Have the capacity to closely scrutinise contrasts or harmonies in complexions and dresses.
11. Scarcely a tint, however soft, escapes your attention.
12. Have decided talent for that part of the plastic arts where shades and hues are indispensable.

A. Visit galleries of fine paintings such as the Louvre in Paris; The old gallery in Munich, The Vatican in Rome, and others in Florence, St. Petersburg, Madrid, &c., and study out the beauties of the old masters. Notice colours in the foliage of forests, or in earth's green carpet decked with attractive flowers, and study the gold and silver pencilings of the sun on the sky.

B. Wear nothing gaudy, and live in a foggy cloudy locality and shun artistic works by famous artists.

LOVE OF THE YOUNG.

1. Children you fairly detest.
2. Calmly indifferent about pets.
3. Dislike to be troubled with children.
4. Can tolerate well-behaved children.
5. Have no great hatred or love for dependants.
6. You sympathise with the sports and foibles of the young.
7. Are beautifully balanced in this faculty.
8. The loss of a child would cause you poignant grief.
9. Take marked delight in the young.
10. Your heart yearns in behalf of every child in distress.
11. Children find in you a sympathiser and protector.
12. Young plants, pets, animals and children you are apt to take great delight in, and especially the latter.

A. Associate with children, ask them questions and answer theirs, keep pets and feed them, have a warm side of your heart ever open to children.

B. Govern your affection for the young with your judgment; be more strict and exacting with the little ones, and never speak of a lost loved pet.

SPOKEN LANGUAGE.

1. Are either dumb or speak very few short words.
2. Barrenness in expression characterises your oral efforts.
3. Cannot express yourself with freedom.
4. May be a rapid speaker, yet are not verbose.
5. Capable of talking tolerably well only when deeply interested.
6. You manage to make yourself understood.
7. Love to hear an eloquent orator.
8. Comprehend readily the meanings of words.
9. Enjoy the company of a fluent conversationalist.
10. Enabled to speak well with practice.

11. When you speak, the ready flow of words convinces those who hear, that you possess large language.

12. In speaking or writing, your thoughts are couched in beautiful and classical language.

A. Talk and write much, and use the best language you can command; study the writings of De Quincey, Macaulay, Washington Irving, Ruskin, and other superior authors. Listen to John B. Gough, and every eloquent speaker; study the most complete dictionary you can purchase, and associate with fluent and superior conversationalists.

B. Say less and think carefully about the manner if not the matter; confine yourself more to study and writing.

DESIRE FOR COMMENDATION.

1. Perfectly indifferent regarding the opinions of others concerning yourself.
2. Home-bred and independent of commendation.
3. Censure or admiration makes little difference to you.
4. Slightly sensitive to blame or praise.
5. Have some love for approval.
6. Not apt to flatter others, nor to condemn them unjustly.
7. Fairly developed in this faculty, yet you hate flattery.
8. You wish to avoid the detractor, or the fawning sycophant.
9. Are rather fond of well-timed compliments.
10. Your feelings are often hurt by what others say of you.
11. Dislike to be laughed at, you enjoy admiration as heartily as you dislike disparagement.
12. He who would catch your heart should bait his hook with adulation.

A. Endeavour to please by politeness and urbanity of manners; enter into cultivated society, and learn to practise all the little blandishments; guard against unpleasant words or actions.

B. Learn to think and care less about what others say of you; first be certain you are right, then pursue a direct course, regardless of satire or adulation; be yourself in spite of public opinion.

THOROUGHNESS.

1. You are disconnected in thoughts, and ever changing.
2. Variety is the spice of your life.
3. Have a tendency to scintillation, lack consecutiveness.
4. Easily interrupted, and sometimes quite desultory.
5. Often desiring to become more concentrative and less spasmodic.
6. Have some, though not great, power of consecutive thought.
7. Are not greatly prolix, or excessively discursive.
8. Fairly developed in love of succession.
9. Can confine your attention quite well to the work in hand.
10. Are well adapted to pursue a connected line of thought.

11. You desire to complete every undertaking you begin, are prolix.

12. Ever tracing out the minute relation one idea bears to another, somewhat tiresome and pointless in conversation.

A. Never leave a job until completed; have but one kind of work on hand at any time; live a settled life, and devote several hours daily to solitary reflection upon metaphysical subjects.

B. Converse with young people who love variety, travel, and read newspaper paragraphs, relate short stories, and omit all unimportant incidents.

CLASS IV.

COGNIZANT CAPACITIES.

DISCRIMINATIVE TALENT.

1. Incapable of noting the most marked simile.
2. Are faulty in comprehending appropriateness.
3. Cannot readily perceive slight distinctions.
4. Take some interest in pertinent comparisons.
5. Grand differences you notice.
6. Are very well balanced in this capacity.
7. You possess good demonstrative and analytical perceptions.
8. Similarities and diversities you readily comprehend.
9. Speedily appreciate fine analysis, and have a tendency for metaphor.
10. Almost instantly you recognise resemblances.
11. Few there be who excel you in detecting likeness or difference.
12. Are a superior genius in analytical research, you readily appreciate titanic variations.

A. Study chemistry, botany, geology, physiognomy, and polite literature; take part in scientific investigations; place two books or apples side by side, and slowly give an oral description of the points of difference, and then describe wherein they resemble each other; read Kant's "Critique of Pure Reason," also peruse thoughtfully Hegel's "*Encyklopädie der Philosophischen Wissenschaften*," and Comte's "*Cours de Philosophie positive.*"

B. Never speak of a fault, if you see one in a friend; take no note of differences; express yourself generally, and never mind sharp precision.

CONSTRUCTIVE SKILL.

1. You can neither mend nor make anything.
2. Deficient in originality and expertness.
3. Capable only of the roughest workmanship.
4. Not likely to excel in mechanical industries.
5. Are far better in planning than executing.

6. Have fair constructive talent.

7. Find some pleasure in viewing machinery while it is in operation.

8. Manifest some dexterity in the use of tools, though you are not greatly versatile.

9. Should you engage in a mechanical trade you would evince considerable ingenuity.

10. Instinctively you determine the effects produced by forces on a body.

11. As a practical mechanic you are expert.

12. None excel, and few equal you, in the department of skilled industry where you labour.

A. Plan for yourself; mend what you break; visit machine and manufacturing shops; strive to do what you see others make; construct sentences; produce theories of your own; at least, try to make something, however crude the result.

B. Guide this capacity arightly by working out the useful only, and never lose time, as thousands have done, by trying to invent perpetual motion.

FACULTY OF JUSTICE.

1. You are deceptive, contemptible, and honourless.

2. Fear of the law may deter you from manifesting your dishonest propensities.

3. Possess some slight regard for duty, but have strong temptations to wander from the right way.

4. Have a fair capacity to comprehend truth and justice; liable to err under great enticement to evil.

5. You desire to be free from iniquity and unrighteousness.

6. Not self-condemning, and if surrounded by favourable circumstances you would manifest becoming deportment.

7. If your upbringing was right, you will probably be free from villany and crime.

8. Not inclined to deliver long speeches on doctrine or duty.

9. You strive to be fair and impartial in your judgment.

10. Detesting deception and chicanery, you are a puissant ally of truth.

11. Manifestly you thoroughly approve of and adopt probity.

12. Indisposed to any course of conduct not strictly honest and upright; incapable of tolerating great wrong.

A. Shun evil associations; when you discover falsity speak out against it, and doubly resolve that you will not commit the same wrong; take arsenic rather than permit guile to enter your mouth, for the former poisons your body only, whereas the latter poisons and dwarfs the soul. Keep your principles inviolate; study the most honest man you know, and strive to imitate him.

B. Cease condemning yourself, as well as others; eat plenty, and never repent.

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NUMERICAL COMPUTATION.

1. Almost wholly wanting in this faculty.
2. Ever blundering, and exceedingly slow in reckoning.
3. Have little taste for arithmetic.
4. Simple problems you are able to solve.
5. Calculating in figures is not your forte, although long practice may enable you to succeed.
6. Fairly developed in the simple principles of numbers.
7. Definite knowledge of the quantity of anything you desire.
8. Practice will enable you to succeed in calculations necessary for your business.
9. Have very good talent for figures.
10. With application you could become quite an expert in calculating and estimating.
11. Are a rapid and correct accountant.
12. In this faculty you bear great resemblance to Mangiamele, the Sicilian shepherd boy, a mathematical prodigy.

A. Count everything you see; add, divide, multiply, subtract, and tax your mind with remembering numbers.

B. Cease to count; do not attempt to get rich by arithmetical calculations alone; give your attention to other subjects.

GREGARIOUSNESS.

1. A complete recluse and ascetic, resembling William Lole, "The Old Hermit" of Leicestershire, England.
2. Friendlessness would be no misnomer when applied to you.
3. The gregarious capacity is rather feeble in you; you arouse opposition; are easily offended by a friend.
4. You have all the friends you desire.
5. May not be so quick to form intimacies, yet you become much attached to others.
6. Enjoy fairly well the society of a few well-chosen friends.
7. The hearty greetings of friends you highly appreciate.
8. Are disposed to manifest friendly assistance.
9. Your friendship strengthens with trials.
10. You love to be on good understanding with others, and in concord and fellowship with the world.
11. Being highly amicably inclined you readily become attached to those you like; have few, if any, foes.
12. Of intimate acquaintances and confiding patrons you have no lack; are a favourer; are charged and surcharged with passionate friendship.

A. Seek society; open your mind more confidingly to others; strive to like everybody; associate with and shun none who are respectable and honest; make no false pretences of friendship, because deception destroys amicable feelings as fire consumes leaves; and, lastly, recollect that he who is without sincere friendship has no true friend.

B. Devote more time to books, and less to the amenities of society;

live more alone, and pass your leisure in meditation; and recollect that, unless you become more wary and less inclined to befriend others, financial ruin may be your reward.

FACULTIES THAT PERCEIVE

Situation, Distance, Magnitude, Proportion, Straightness, Angles, Condition, Density, Altitude, Gesture, Gait, Motion, Quality, Light, and give Decision and Perseverance are explained under this head.

1. You scarcely notice anything.

2. The use you make of your eyes could wisely be enhanced.

3. Often take unfeigned pleasure in casually regarding your surroundings.

4. Have considerable desire for knowledge of the size, weight, and measurement of objects.

5. Ponderous masses of slowly-moving material instantly gain your undivided attention; you scrutinise quite closely the condition, proportion, and stability of things and persons.

6. Can comprehend the speed, quality, and general physical state of a person or animal; the intensity of light, as well as the straightness of objects you notice; are quite fond of travelling.

7. Enjoying a fair talent for observing the walk, gesture, and attitude of an individual; you are enabled to divine the character and motives of a friend; are also capable of pursuing an undertaking with a good degree of persistence; find fair delight in knowing the distance, bulk, where a thing is, and its texture and weight.

8. Have a disposition to notice the rigidity or pliancy of people and material; intensity of light, activity, perpendiculars, horizontals, and where a thing is, as well as its practical value, are likely to awaken in you a lively interest.

9. You rarely mistake regarding proportion, quantity, magnitude, solidity, centre of gravity, situation, or quality; utility is a primal consideration, to which you give pre-eminence.

10. Decision and perseverence are dominant qualities of your mind; an excellent judge of quantity, distance, angles, perpendiculars, motion of machinery or human beings, characters, harmony of proportion, perpendiculars, solidity, and weight; you seek truth by the objective method, and endeavour to mould your conceptions that they synchronise with observed data.

11. Few, if any, excel you in determining position, measurements, texture, stability of character, and you are possessed of great decision; thoroughly unswerving in purpose; have a superior appreciation of noble and appropriate personal bearing.

12. Eagerly you examine everything that comes under your notice; you detest that which moves slothfully, but are highly delighted with lively action expressive of sentiment or knowledge; length, breadth, height, dimension, distance, light, shade, and quality you detect at a glance; have little sympathy with ultimate abstractions; you take great pleasure in observing and verifying every accumulation of facts; you are the ultimate of practicality.

A. Interest yourself in all natural sciences; rely less on spontaneous conjecture and more on verification; travel; practise drawing; study physiognomy, for there is no other science that requires a person to observe more closely, and none is more thoroughly interesting, and that can be applied so often. Many persons have stated to me that since having read my work on Physiognomy, entitled "Nature's Revelations of Character," they have observed peculiarities in forms and faces which they now understand, whereas, before the perusal, the various forms of ears, noses, eyes, foreheads, chins, &c., were, to them, occult or meaningless blanks.

B. Lead a solitary life; read metaphysical and philosophical works; think more of spiritual and less of physical subjects; employ more of your time in tracing the relations of ideas, and less in the relations of objects.

REVERENCE.

1. You are as rude and impudent as a street arab of London.
2. Being somewhat trifling and pert you win little esteem.
3. Impertinently inclined; but can be quite civil.
4. Rarely see those you venerate or honour more than you do yourself.
5. It is your nature to treat others with due decorum, especially the aged.
6. Are quite favourably balanced in devotional feeling.
7. Extreme obsequiousness or derision you wisely strive to avoid.
8. Capable of being quite truly devoted to whatever appears reasonable.
9. Possess esteem for merit and honour for the good.
10. Have a high degree of veneration; are deferential.
11. Manifest marked civility towards mankind, and reverence for the Supreme Being.
12. None are more highly reverential than you, or more truly regardful of sacred things.

A. Never crowd yourself in before others who have an equal right; speak respectfully of everybody or remain silent; be attentive to aged people; willingly and gracefully submit to your circumstances; tolerate the views of others, however they may be at variance with your own; contemplate the living world around you, then look away into unknown space, and view the circling spheres that adorn the sky while they silently persuade human intelligence to believe in and adore the Sovereign and Creator of the universe.

B. Idolize no person; revere everything good; love God; take no trouble about the future.

CLASS V.

ELEVATIVE ENDOWMENTS.

MENTAL SYSTEM.

1. Thoughts in your mind resemble foam on a whirlpool, or the jumbled colours in a kaleidoscope.

2. Helter skelter, higledy-pigledy, and confusion reign among your ideas.

3. Anarchy, chaos, and anomaly give your thoughts a deranged appearance.

4. Appreciate more than you keep order.

5. If well trained you evince fair discipline, otherwise are rather unmethodical.

6. You find delight in seeing discipline and proper gradation.

7. Not being a master in arrangement yet you admire what is arranged according to some common law or end.

8. Have more mental than material regularity.

9. Take considerable pleasure in subordination, routine, course, and method.

10. Delight in seeing everything *en règle*, well regulated, and unconfused.

11. Are highly uniform in ideas and methodical with things.

12. Are exceedingly clear and untangled in thought, and will work earnestly to keep each thing in its proper place.

A. Keep an even tenor of mind; when you describe what you have seen commence with what you saw first, and continue with subjects in the order they were seen; strive to maintain an unruffled spirit at all seasons; rise at a certain hour each morning and retire to rest invariably at a specified time; avoid the hurley-burley of crowded marts, and the hodge-podge, lumber and litter of the world.

B. You are a slave to order; throw down each article in the most handy place, until you conquer your excessive tendency to regular arrangement; be less prim and become more natural.

ENDOWMENT OF WIT AND HUMOUR.

1. You are as dull, grave, and solemn as a funeral.

2. Very sober and serious. A sodden soul.

3. Generally unfacetious and deficient in wit.

4. Have moderate power of combining ideas with a ludicrous effect.

5. Witty ideas and funny thoughts slowly enter your mind.

6. You perceive and relish fun; yet are not an original punster.

7. Are fond of that which coaxes laughter out of you.

8. Take considerable delight in quaint ideas.

9. Epigrammatic sayings and condensed aphorisms render you cheerful and genial.

10. Whatever is absurd or witty you highly enjoy.

11. You appreciate a good joke; the ludicrous or comical you can turn to mirth-making.

12. Your witticisms are sparkling and provocative of merry peals of laughter.

A. Let out your funny thoughts; associate with witty people; laugh at everything ludicrous; read the writings of those men whose lances of ridicule and spears of wit have relieved the world of vast burdens of folly and caprice.

B. Cease at once and forever trying to make wit, for all genuine and keen wit is spontaneous; be earnest, and apply your mind to philosophy, history, or mechanics; abandon that everlasting grin, and suppress your ridicule.

ADMIRATION OF THE SUBLIME.

1. Without conception of grandeur in nature or art.

2. Vapoury notions of the vast fearfully creep into your mind as do mice into a granary.

3. Grand and majestic phenomena presented to view during a storm faintly arouse your appreciation.

4. You enjoy the lofty or grand in thought or style.

5. Within you there is often an uplifting emotion produced by sublime objects.

6. Magnificent sceneries fill you with elevated conceptions.

7. Majestic and lofty sights awaken in your mind feelings of awe and desires for excellence.

8. Grand mountains, vast and mazy heights, stir you to greater aspirations.

9. Sublime scenes tend to exalt, ennoble, and improve your tastes.

10. Mountain scenery, ocean-dashed cliffs, the storm frolicking among mountain solitudes, each finds responsive fibres in your being.

11. The wierd and terrific, whether in the tempest or the mad cataract, invite you to fancies illimitable.

12. Vastness and splendour of appearance instantly transport you from meagreness of thought to nobler states of being and deportment.

A. Depart from the busy world; read the works of poets and authors who express their thoughts in sublime language; seek solitary communion with nature; watch the moon as it skims the sky; view the grand pictures painted morning and evening by the sun; after seeing the lightning darting down the clouds listen to the thunder as it mutters praises to the Divine Creator.

B. Keep constantly employed; live more on the surface and less in the depth of your heart; avoid splendid scenes, picturesque descriptions, and illustrious people.

APPRECIATION OF THE BEAUTIFUL.

1. To you the cabbage is more beautiful than the rose.
2. Proportion and utility please you more than beauty.
3. Your soul is not ravished with beauty.
4. A pleasing assemblage of qualities in objects or thoughts affords you moderate pleasure.
5. Lives of beauty cause you to feel a glow of pure delight.
6. Particular objects please your æsthetic sense, yet making poetry will hardly compensate you.
7. Enjoy the beautiful in art or nature.
8. Imaginative and tasteful in a fair degree.
9. Possess superior taste and excellent conception.
10. Oratory, poetry, and symmetry thrill you with delight.
11. You possess much sprightliness and buoyancy, and aspire to the exquisite.
12. Have the most perfect taste.

A. If possible, visit Italy, and there view the museums and galleries of art; study poetical works; eschew all bad habits; associate with the cleanly and refined; arrange everything you have in a tasteful manner; dress neatly, and beautify your room with works of art.

B. Devote your attention to works of utility; cast off your ornaments; dress plainly; eat heartily; sleep much; and ever guide your taste by your reason.

CAREFULNESS.

1. Indiscretion and rashness characterise your life.
2. Ever unwary, cursory, and remiss in conduct.
3. Apt to pretermit and gloss over matters when possible.
4. Slightly inclined to take no account of minor transactions.
5. May omit or make light of ordinary affairs, and look sharp to those of importance.
6. Are solicitous and deliberate in a reasonable degree.
7. Forethought and precaution keep you from being negligent.
8. Generally you manifest due heed and care in your occupation.
9. You take rational precautions against accidents.
10. Having a tendency to look about your possessions renders you comparatively safe.
11. Full of cautel and wariness, hence you are largely free from perfunctoriness, lache, or omission.
12. Particularity and deliberation render you extremely prudent and discreet.

A. Counsel with circumspect friends, and adopt their advice; never act on the impulse of the moment, but take time to deliberate on every subject; look more vigilantly for danger, and bear in mind that you trust too much in your feeling of security.

B. Dash on; break away from anxiety; live for to-day; decide at once; trust more to first impressions; pass over trifles; cease to imagine evils.

MEMORY OF INCIDENTS.

1. Historical facts and life occurrences are readily obliterated from your mind.

2. What you know will soon be consigned to the waters of Lethe.

3. Knowledge escapes from your mind with surprising rapidity.

4. May recollect important events, but minor details quickly sink into oblivion.

5. Have a short memory which needs cultivation.

6. By taxing yourself you may retain necessary knowledge.

7. Are able to carry your thoughts back with fair freedom.

8. Your retrospective endowment is not the best, yet with due attention you are able to remember.

9. Readiness in retracing the past is yours as well as retention.

10. There is great tenacity in your mind; vivid reminiscences of the past are ever with you.

11. Retrospection is a pleasure to you; without difficulty can keep in mind the ideas you desire.

12. In retentiveness, recognition, and recurrence, you have few equals and no superiors.

A. Give the most concentrated attention to all that is worthy of recalling; often retrace what you have read; refresh the memory by reviewal; associate with those who know by heart; tax and trust your memory.

B. Your tendency to carry in the memory and rememorate is so strong that you are liable to write and relate what you have read or heard and deem it original; obliterate unpleasant recollections by changing the thoughts to other subjects.

FAITH.

1. Casuistry, schism, and distrust, appear in your mind as stars in the heavens at nightfall on a clear evening.

2. You doubt, diffide, and mistrust, nearly everybody.

3. Are shy of belief, and at sea regarding many subjects.

4. Being somewhat sceptical, you can place confidence in that only which appears reasonable.

5. Having little reliance in the wonderful, you desire good proof to be convinced.

6. Can ordinarily take upon trust if your reason is satisfied.

7. Possess fair tendency to believe your friends.

8. Rarely suspect or call in question what conforms to your good sense.

9. Quickly impressed with the sensible, and wedded to evidence.

10. Are quite readily imbued with what others say; not difficult to convince.

11. The noble trust you place in friends wins their confidence.

12. Unsuspecting and fond of the wonderful; you have unshaken belief.

A. However mysterious anything seems, make no doubt about it

until you have honestly investigated the subject, and then rely upon your own knowledge; meditate and converse upon divine things; bear in mind that your materialism is as worthless as any earthly material; allow no suspense, uncertainty, scruple, or qualm, to lead you into miscreance or incredulity.

B. Doubt what you cannot see; study anatomy, geology, and physics, and read the works of Descartes, Hobbes, Locke, Berkley, Hume, Condillac, Lyell, Owen, Darwin, Spencer, Huxley, &c.; cause your emotions to submit to demonstration.

SYMPATHY.

1. Are as devoid of kind-heartedness as was Brutus, Caligula, or Domitian.

2. Malice, truculence, and spite, have taken deep root in your feeble mind.

3. Delight in harassing and disobliging friends and acquaintances.

4. When well treated, you are benign; but if abused, ill-nature, ferrity, and malignity are manifested.

5. Beneficent feelings occasionally thrill your being.

6. Have a fond desire to be of use and do good.

7. Are well-meaning and humane.

8. Being spleenless and gracious you arouse kindliness in those you love.

9. Those that err unintentionally you are ever ready to exculpate.

10. Are tender-hearted, and disposed to sympathise with those in trouble.

11. True fellow-feeling fans within your breast the warm fire of charity.

12. Good-will is ever prompting you to aid whoever may seem to be in need.

A. Give, however little, whenever you can, to relieve distress; share with friends every dainty; be obliging and amiable on all occasions; tear off the case of malevolence that encrusts your heart; avoid ferrity and immanity, and never harbour malice.

B. Keep discriminative watch over your good nature lest you become the subject of imposition; advise with economical persons who are your friends, and guide all your acts of charity by their counsels.

FACULTY OF REASON.

1. Acting irrational, silly, and absurd, causes you to be thought half-witted.

2. A twaddler, full of trivial and foolish notions.

3. Obliquity of judgment causes you to fail where careful conclusions are required.

4. Tolerant, and capable of drawing inferences from ordinary facts.

5. Though not able to take the broadest views of subjects, you are not bigoted or dogmatic.

6. Hating fallacious and irrelevant assertions, you appreciate dialectic minds.

7. Fairly gifted in making deductions.

8. Delighted with unimpulsive and valid reasoning.

9. To ascertain the sound cause of known results is a study highly befitting your endowments.

10. Conclusiveness and cogency are so deeply rooted in your mind that you require demonstrative proof of every new or strange subject.

11. The facility with which you form an opinion proves your freedom from bigotry, dogmatism, and narrow conceptions.

12. Soundness and force of judgment is apparent in all of your ratiocinations. In generalisation and in logic you have remarkable aptitude.

A. Ask the reason *why* a thing is so; debate and sift carefully every argument you hear; form your own conclusions and implicitly rely upon them; study metaphysics and the works of great reasoners; believe nothing that appears unreasonable.

B. Follow your instincts and presentiments more; mingle in lively and fashionable society; and talk and think as superficially as most you meet, and in due time you will not be troubled with too much reason.

OCCUPATION.

By nature you are adapted for

MARRIAGE.

Your companion for life should be

TABLE FOR MARKING.

EXPLANATION.—In Columns I. are the names of the Forms and Faculties; in II. are the numbers of the pages where the faculties are described; in III., the sizes of the forms and faculties are marked; in IV., A indicates that the form or faculty needs strengthening, and B signifies that repression is advisable.

COLUMN I. Name of the Faculty or Power.	COL. II.—Page.	COLUMN III. Size of the Faculty.	COLUMN IV. Culture, A; Restraint, B.	COLUMN I. Name of the Faculty or Power.	COL. II.—Page.	COLUMN III. Size of the Faculty.	COLUMN IV. Culture, A; Restraint, B.
Health,	3			Language,	19		
Abdominal Form,	6			Commendation,	20		
Thoracic Form,	8			Thoroughness,	20		
Muscular Form,	9			Discriminative,	21		
Bony Form,	10			Constructive,	21		
Brain Form,	11			Justice,	22		
Relish for Liquids,	12			Computation,	23		
Solid Food,	12			Gregariousness,	23		
Imitativeness,	13			Situation, etc.,	24		
Resistance,	13			Reverence,	25		
Self-Estimation,	14			Mental System,	26		
Locative Habits,	15			Humour,	26		
Tone,	15			Sublime,	27		
Concealativeness,	16			Beautiful,	28		
Curvativeness,	16			Carefulness,	28		
Accumulativeness,	17			Memory of,	29		
Monogamic Love,	18			Faith,	29		
Colour,	18			Sympathy,	30		
Love of Young,	19			Reason,	30		

Old English spelling has been employed throughout this book, because it was printed in Britain, where such spelling is in use

OF THE UNIVERSITY OF CALIFORNIA

The book is much more than a mere treatise on Physiognomy. It recognises the truth too long ignored by the quacks who have dealt with the subject, that the whole of the parts of a compound organism such as man are in direct intercommunication, are mutually dependent, and are each indicative in measure only of the temperament and character of the individual. Hence Physiognomy is dealt with by Dr. Simms in close connection with animal physiology, and there is no attempt made to sever what was naturally bound together. Not only is the basis from which the writer starts the true one, he deals throughout wisely with his subject. His aim has evidently been to extract what experience has shown to be valuable from the researches of his predecessors in this field of investigation, to base his arguments as far as possible on admitted facts, and to introduce his own views when needful for the formation of ascertained truths into a clear and connected system. The manner in which he has performed his task is worthy of warm approbation. His work is a mass of information, his arguments are subtle and ingenious, and he presents a series of conclusions, the vast majority of which cannot be called in question. The book is a thoroughly good one, It calls attention to a science as yet in its infancy, but the operation of which is universal as society itself. The ordinary reader will peruse it with sustained interest, and the scientific student can hardly fail to receive from it a stimulus to engage in a research at once practically useful and thoroughly entertaining.—*The Edinburgh Evening News.*

Books are not *new* in the fullest sense, unless, as is the case with the work in hand, they set forth new discoveries, and give expression to hitherto unwritten thoughts. Dr. Simms, besides effecting consummate arrangement of materials, clothes his new thoughts and remarkable discoveries in clear, manly, and logical language. Successfully avoiding egotism and intolerance, the work is characterised by devotion to charity, honesty, and truth throughout, bespeaking the author's possession of a mind of a thoroughly independent cast, and completely emancipated from previous authority. Most of the volume is taken up with terse and graphically written sketches of those forms, faces, attitudes, and movements of men and animals by which character is revealed, the whole being systematised in accordance with the human structure. The qualities and assimilation of food occupy one chapter, which demonstrates how the very nature of the animal or vegetable substances consumed is engrafted on the mind and body of the consumer; and how, by a judicious choice of aliment, vicious tendencies may be suppressed or controlled. An article on the rearing of youth, which is appropriately illustrated with engravings of adults and juveniles, is pregnant with information for the parents of young families; while that on the localising of faculties in the author's usual logical and incisive style, shows how entirely his ideas are under command. In short, the physiological acumen of this work, its high tone, its display of mental vigour, and its imposing array of facts, arguments, and deductions, forming a substantial system of intellectual science and practical physiognomy, cannot fail to ensure for its author enduring distinction and well-merited renown, while, at the same time, conferring upon all classes of society benefits of inestimable value.—*Ixion, London.*

This book is the result of many years' study and observation, in which Dr. Simms has given to the world a well-digested system of physiognomy, replete with interesting facts, and illustrated with nearly three hundred portraits. He affirms and demonstrates that every variation of the human form and countenance is the result of one or more well-defined causes, and that we have only to understand these results with their principles, and we shall be able to decipher the hieroglyphics of nature with unerring certainty. We find no difficulty in admitting, for instance, that if a man gives himself up to bursts of uncontrolled passion, and the inward storm appears from time to time in a wrathful countenance, the traces thus marked will, through time, become permanent and indelible. On the other hand, that the countenance of a man habitually kind and gentle will present a calm and unimpassioned aspect. It would not be unreasonable to conclude that the same natural law would be general and applicable to every emotion, passion, or human faculty of mind, and make themselves apparent in the face as well as anger, kindness, &c. Our physiognomist only carries out in a broader outline and more minute detail what a few, if not all, instinctively perceive in a general and superficial manner. He holds that every emotion of the mind, as love, hatred, joy, grief, courage, cowardice, also every intellectual exercise, reproduces and photographs itself in some part of the body; and in proportion as any set of emotions, or mental exercises, occupies the inner man, so will its external sign become more conspicuous and permanent. He, therefore, formulates these unerring productions of nature's pencil that every one may read them with unfaltering certainty. To the vicious this must appear a somewhat unpleasant discovery; but to society in general it must seem highly desirable that characters should be more easily read at sight than they generally are. The whole fabric of our commercial prosperity, for instance, rests on the degree of reliance which each man can place in the integrity of those with whom he has to do, and it must be of incalculable advantage to the merchant to be able unerringly to select those to serve him who are of the stamp suited for his business, and those to deal with who are worthy of confidence. The traveller who wishes to beguile a tedious journey with conversation would be glad to discover at a glance which is the socially inclined individual, and what kind of topic will be agreeable to him. It must be important to parents in choosing a trade or profession for a son, to know certainly what he is most likely to succeed in; and invaluable to those who are selecting partners for life to be assured with respect to the suitability of their choice, though it must be admitted that in these cases physiognomy, however valuable, is not the only guide, as it is when we meet those with whom we must transact business or interchange social converse without time for lengthened acquaintance. A general knowledge of this science would make the impostor and thief so apparent that wickedness would be no longer marketable, and there would be little chance of a livelihood except for the honest and upright. Merciless exposure of vice, as Dr. Simms intimates, would take place, if the vicious man carried on his face a signboard read by every one, and that would be such a check that these unfortunates would be compelled to seek the paths of virtue. This is certain to be when the principles of physiognomy are put into daily practice, when they are taught in our schools, and seated in the professorial chairs of our colleges. This work gives evidence of great originality and comprehensive observations that the practical mind will not attempt to controvert. There is also a vigour of style, joined with sound judgment, displayed in the book and system thus given to the world, and they cannot fail to gain for the author many warm friends and permanent fame. It is one of the best works we know on the subject—popular, thoughtful, and advanced, without being rash and speculative. Were it properly appreciated and read, an improvement in our race, both physical, mental, and moral, would be the gratifying result. We cannot too strongly recommend it.—*The Monetary and Mining Gazette, London.*

EXTRACTS FROM PRESS NOTICES

OF

DR. SIMMS AND HIS LECTURES IN GREAT BRITAIN.

Dr. Simms is known as a most skilled practical physiognomist.—*Pictorial World, London.*

The room was crowded, and numbers were unable to obtain admission.—*The Leeds Express.*

Will amuse, instruct, and enlighten the mind, and purify the affections.—*The Rock, London.*

Dr. Simms lectured on physiognomy, and highly interested his auditors.—*The Sunderland Times.*

Dr. Simms is exactly the gentleman to popularise a very useful science.—*The City Observer, London.*

The lecturer treats his subjects in an able and interesting manner.—*The Newcastle Daily Journal.*

Dr. Simms' lectures at Westbourne Grove Hall are a decided success.—*West London Times, London, 1873.*

In describing character from the form and face, Dr. Simms stands unequalled in the world.—*The Free West, London.*

Dr. Simms' lectures are full of curious facts and observations, and are copiously illustrated.—*The City Press, London.*

His design has nothing absurd in itself. The gift of reading character is of great use.—*The Saturday Review, London.*

A better acquaintance with physiognomy ought to be the first consideration of this age.—*The Cosmopolitan, London.*

He presents a new and complete analysis and classification of the powers of the human mind.—*Public Opinion, London.*

Dr. Simms has pushed to a logical conclusion the doctrine that a man's character is seen in his face.—*The Metropolitan, London.*

It cannot be denied that the subject is of importance, evidence of shrewd observation on the part of the author.—*The Lancet, London.*

The author is a true physiognomist, and is known as one of the most interesting popular lecturers we have.—*Human Nature, London.*

Large and intelligent audiences have attended the lectures, which have been highly successful.—*The North British Daily Mail of Glasgow.*

Dr. Simms has been delivering a course of interesting lectures in the City on "Human Character." The lectures were highly instructive.—*The Baptist, London.*

Dr. J. Simms, the eminent physiognomist, is delivering a course of very instructive lectures on physiognomy and physiology.—*The National Food and Fuel Reformer, London.*

Dr. Simms, an exceedingly clever physiognomist, delivered a series of the most instructive and amusing lectures to which it has ever been our pleasure to listen.—*Ixion, London.*

Last night Dr. Simms delivered the last of a course of nine lectures in the Freemasons' Hall, George Street. The lecture last evening was delivered to a crowded audience.—*The Daily Review of Edinburgh.*

Anthropological Institute, Nov. 13, 1873.—"A most interesting oral communication was made by Dr. Simms, of New York, on a flattened skull which he had brought from the Island of Mamcluke in the River Columbia."—*The Hour* (a daily), *London.*

An Intellectual Treat.—Dr. J. Simms, the author and physiognomist, is well known as an expert handler of the matters upon which he touches, and as they concern all classes of the community, this opportunity should not be lost.—*The Leicester Evening News.*

Anthropological Institute of Great Britain and Ireland, Feb. 9, 1875.—"Dr. J. Simms also gave his experiences of the physical characteristics of the Basques, as he had lately seen them, and testified to the admixture of fair and dark elements noted by Prince Lucien Bonaparte in his remarks."—*The Academy, London.*

On Friday evening, Dr. J. Simms, the most able and profound living physiognomist, delivered his fifty-second and closing lecture of a very successful series in London, on physiognomy and physiology, to an audience that occupied every portion of the large gallery and the body of the spacious room in South Place Chapel.—*Daybreak, London, March 26, 1875.*

Dr. Simms is one of the most successful exponents of this science. He is the author of a very learned and elaborate work on the subject. It is a subject on which society needs much teaching, and none is better able to impart that teaching than Dr. Simms, or to convey it in a manner more agreeable and attractive.—*Northern and Eastern Examiner, London.*

PHYSIOGNOMY.—Dr. J. Simms, the learned author of "Nature's Revelations of Character," a work that has excited great inquiry into this much neglected science, is now delivering a course of lectures on his favourite subject in London. We have attended two of those lectures, and have been much interested. Dr. Simms has studied the indications of character as shown in the lineaments of the face, for a lifetime, and has studied them well. He is the most able and the most popular exponent of physiognomy among living men. His lectures are instructive, and abound with fine sallies of rich American humour. The interest excited in the subject is very great, for notwithstanding the inclemency of the weather, the lecturer draws full audiences. If our friends have an hour to spare after seven in the evenings they may spend it pleasantly and profitably with this distinguished physiognomist; and if they wish to know their real character, and the secret of their personal power, Dr. Simms will aid them.—*The Monetary and Mining Gazette, London, Jan. 23, 1875.*

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